January 11, 2010

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California Air Resources Board
1001 "I" Street
Sacramento, CA 95812
Submitted electronically

Re: Comments on AB32 Cap-and-trade Preliminary Draft Rule

Thank you for providing the opportunity to comment on the preliminary draft regulation (PDR) for the cap-and-trade program to be implemented under the Global Warming Solutions Act of 2006 (Assembly Bill 32). Overall, Environmental Defense Fund (EDF) considers cap-and-trade the cornerstone of California's long-range effort to spur innovation, promote investment and job growth, and reduce greenhouse gas pollution.

Introduction and Overview

A well-designed, broad, multi-sector cap-and-trade will put California on a path towards a sustained and sustainable economic recovery. The California carbon market will burnish our State's longstanding environmental leadership and become the foundation for a federal program. Cap-and-trade has proven to be the most effective policy tool for generating rapid emissions reductions at the least cost, and EDF strongly encourages CARB to commit to the broadest possible market beginning in 2012. We look forward to working with the board and staff as the cap-and-trade regulation is refined throughout 2010. Notwithstanding the myriad challenges of reaching consensus on such a complex program, California must press forward on schedule or we risk adverse effects on the critical federal policy discussion.
Several good ideas in the PDR merit highlighting:

- Three-year compliance periods, banking and use of offsets will provide important flexibility and cost-containment for regulated entities and commensurate protections for consumers.
- "Hard" price collars and safety valves are ruled out in favor of allowance reserves and other cost- containment features.
- Transportation fuels and natural gas use are contemplated for inclusion in Phase I.

In these comments, we respond to discussion questions posed in the PDR. Our most significant recommendations are:

Scope

- Include transportation fuels and natural gas in Phase I while providing consumer protections in the form of rebates to low-income energy users
- High global warming pollutants should eventually be incorporated into the cap-and-trade program, initially as offsets, but eventually as a capped sector

Carbon Accounting

- Treat biofuel combustion emissions like those from other fuels but include a system to account for and credit differences in upstream carbon impacts and land use (akin to a hybrid of PDR options #2 & #3)
- Treat biomass combustion consistently for stationary and mobile sources
- Carbon accounting in the LCFS and cap-and-trade programs should be as consistent as feasible, but need not be identical

Offsets

- Limit offsets by quality not quantity
- Accept offset credits from outside California that meet rigorous quality standards established by CARB
- Initially, CARB should directly credit projects and accept high quality credits from other programs, including international sector-based credits

Cost Containment

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- A well-designed, comprehensive cap-and-trade program is the best way to achieve AB32 goals quickly at least cost
- "Hard" price collars and safety valves are wisely ruled out
- Avoid setting early phase caps too high to create a meaningful price signal

Community Benefits

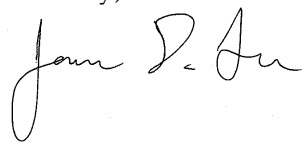
- CARB should complete economic impact analyses prior to finalizing the cap-and-trade program
- Enhance the program by (a) inviting non-regulated entities to achieve and document emissions reductions in disadvantaged communities, and (b) crediting reductions achieved within these communities by local governments and community organizations.

Enforcement

- Financial penalties for non-compliance should be sufficient to automatically inspire high rates of compliance

Thank you for considering our feedback.

Sincerely,



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Outline of Comments

EDF evaluates the PDR and gives responses to questions posed, considering the following criteria that are broadly indicative of program reliability, effectiveness, equity and efficiency:

- Environmental performance with overall emissions declining to sustainable levels
- Reliable oversight and transparency
- Simple market designs that minimize transactions costs and avoid pitfalls, such as concentrated market power
- Utilization of co-benefit opportunities
- Market efficiencies, such as incentive for innovation

1. Scope: A carbon market with a broad scope and reliable accounting will most reliably deliver low-cost environmental and economic benefits

1.1 Include transportation fuels and natural gas in Phase I while providing consumer protections in the form of rebates to low-income energy users

Environmental Defense Fund is very supportive of CARB's proposal in the PDR to include transportation fuels and natural gas at the outset of the AB32 cap-and-trade program in 2012. By incorporating the broadest set of sources possible into the program, statewide and regionally linked markets will be more effective at seeking out and rewarding emissions reductions across multiple economic sectors, thereby achieving greater overall environmental and economic benefits.

While EDF applauds CARB for considering transportation fuels and core natural gas for Phase I coverage, we believe significant measures must be taken to minimize regressive economic effects on consumers of these products (small businesses, residents, etc.).

With regard to the parties regulated for fuel emissions, the current PDR proposes the regulated entities be the upstream producers/deliverers of the fuel. EDF provides comments for each fuel sector in the following sections.

1.1.1 Assuming adequate inventory & reporting frameworks, use local distribution companies, importers & specified end-users as the point of regulation for smaller disaggregated sources of emissions (core natural gas customers).

The PDR considers three possible regulated parties for natural gas-related emissions: (1) local distribution companies (LDC), (2) end users when receiving gas by means other than an LDC, and (3) importers of compressed or liquefied natural gas. The providers of natural gas would be responsible for the GHG emissions calculated from the carbon content of the fuel they sell multiplied by the quantity sold to all end-users who do not have a direct surrender obligation.

EDF is very supportive of the PDR proposal to include emissions from core natural gas users and finds that this proposal tracks well with the recommendations EDF provided to CARB in comment letters on the AB32 Scoping Plan[1]. In those letters, we discussed regulating midstream or downstream emissions by counting utility distributions to core customers (residential and commercial) as an aggregated source of emissions (so the point of regulation for downstream emissions is at the upstream level). By regulating at the distribution / utility (upstream) level, the cap-and-trade program will facilitate reductions at the individual and small businesses level without creating an undue economic burden.

[1] See Environmental Defense Fund letters to CARB dated October 2007 and August 2008.

By incorporating this sector into a cap -and-trade market, CARB will inspire utilities to expand the realm of traditional energy efficiency programs to include improvements in heat recapture and natural gas use reduction. Thus, through a price on carbon for the natural gas delivered to core-customers, solutions that reduce gas use while providing the same or better service will be at a premium. Such an approach will lead to reduced overall emissions, new mitigation opportunities and, potentially, lower market clearing prices for compliance instruments.

The timely, transparent collection of emissions data is a prerequisite for successful inclusion of any sector in a cap-and-trade market. EDF urges CARB to assess the current data collection and reporting infrastructure for utilities' core natural gas distribution systems and develop a mandatory reporting system sufficient to ensure confidence in the entity emission rates.

1.1.2 A mid-stream approach that places refiners (producers) & importers as regulated parties provides a balance between scope of coverage & ease of implementation for liquid transportation fuels such as California's reformulated gasoline, diesel, and liquid biofuels.

Under a cap-and-trade program, upstream coverage of emissions tends to be the most efficient point of regulation because it minimizes the number of regulated entities while maximizing the scope of coverage. However, since liquid transportation fuel comes into the state as both refined and raw products, and there are many in-state upstream producers, a mid-stream approach that places refiners (producers) and importers as regulated parties provides a balance between scope of coverage and ease of implementation. Therefore, EDF supports the proposed point of regulation in the PDR for liquid transportation fuel providers.

1.2 To calculate the surrender obligation for liquid transportation fuels (gasoline, diesel, & biofuels), CARB should use a hybrid of options #2 & #3 at PDR pg 40.

The PDR suggests four different options for calculating the surrender obligation for liquid transportation fuels (gasoline, diesel, and biofuels) - ranging from a minimum overall obligation (i.e., carbon content of fossil fuels only) to a maximum obligation (i.e., full lifecycle accounting and coverage of all fuels, including biofuels). This calculation effectively establishes the scope of coverage for these fuel types under the cap-and- trade program.

EDF recommends CARB calculate the surrender obligation for liquid transportation fuels (gasoline, diesel, and biofuels) through a hybrid of options #2 and #3. Recent increased awareness of the fact that net emissions from biofuels vary widely (both published in peer-reviewed journals[2] and developed in the rulemaking for the California Low Carbon Fuel Standard) has shown the importance of accounting for emissions associated with fuel

[2] Fixing a Critical Climate Accounting Error Searchinger et. al., Science, Vol. 326. no. 5952, pp. 527 – 528 (October 2009) http://www.sciencemag.org/cgi/content/short/326/5952/527

combustion, fuel processing and transport, and land-use activities associated with the production of feedstocks. CARB should strive to create a program that incorporates the most accurate and science based accounting possible. In the following sections, we detail our thinking on this issue.

1.2.1 CARB's proposed options for transportation emissions accounting have a variety of benefits and challenges.

The PDR proposed four options for accounting for transportation fuel emissions. Below, we discuss each option before arriving at a recommendation to use a hybrid of Options 2 and 3.

1. If CARB were to pursue only Option 1, the program would be ignoring recent peer-reviewed scientific research[3] finding that accurate net emissions accounting for fuels must take into account the direct emissions of the fuel combustion and reduce it by an accurate quantification of carbon sequestration and/or emission reductions (e.g. from plant decomposition) that occurred during its feedstock production. Without accounting for the actual conditions (carbon flux) that occurred, CARB would be underestimating true emissions of biofuels to the atmosphere in the transportation fuel mix.

2. If CARB pursued Option 2 alone - looking at embedded carbon without land use - the emissions ascribed to biofuel combustion would be an overestimate because any additional sequestration or emission reductions associated with feedstock production would be ignored. Ignoring these benefits will disadvantage those biofuel producers that can legitimately show that additional carbon dioxide uptake from the atmosphere during production of feedstocks, or avoided emissions from biogenic material decomposition, effectively reduced the net carbon flux to the atmosphere resulting from biofuel feedstock production and consumption (excluding production emissions).

   In the event that a comprehensive program were developed to allow biofuel feedstock producers to account and get rewarded for the net emissions reductions associated with their feedstock production, pursuing option 2 alone would be appropriate because the sequestration and avoided emissions could be accounted for separately. However, at present time such a program does not exist. Such a program would have the advantage of tying carbon crediting directly to observable activities on the site generating the carbon benefits but the challenge would be to ensure transaction costs are kept sufficiently low. If this is deemed the right approach, the development of such a crediting program should be a priority. The net reduction benefits should not be excluded from the California emissions accounting.

3. If CARB were to pursue Option 3, incorporating net "carbon content" plus direct and indirect land use emissions with indirect emissions presumably calculated solely through the use of macroeconomic models (i.e. GTAP), the agency would be

[3] Id

reducing the incentive for individual biofuel producers to optimize their production methods such that they minimize leakage (key concern being captured through this approach). Production practices that minimize leakage reduce the offsite impacts of the feedstock production and include increasing on-site productivity and using of waste materials that would otherwise decompose.

4. If CARB were to pursue Option 4 and utilize full lifecycle emissions accounting, the cap-and-trade program could result in an unwieldy, uncertain data set and set the stage for double regulation and double counting of certain upstream emissions. As the California and national cap-and-trade programs commence and emissions points in the lifecycle for liquid transportation fuels are included, a metric which attributes those emissions to the fuel itself would need to be adjusted to avoid double counting. Therefore, at this point, CARB does not need to capture all upstream emissions of transportation fuels and would be better served by developing a replicable, linkable cap-and-trade program that includes the various upstream components of the transportation fuel lifecycle chain, such as the refining sector, the oil and gas exploration and production sector, and the biofuel processing and production sector.

1.2.2 EDF recommends CARB develop an estimation method that accurately accounts for carbon flux from biomass production.

As identified in the PDR, significant advancements related to emissions accounting have been made recently. These advancements pertain both to fossil and biofuel accounting and encompass the major issue of carbon flux due to land use change. Through this information, a critical flaw in traditional accounting for emissions from biomass combustion (both as liquid fuel and in stationary source applications) has been identified. **Biomass and biofuel combustion emissions should not be treated as zero carbon simply because the feedstock is of biological origin. Rather, sound science requires an accounting of the direct combustion emissions and the net carbon flux (atmospheric and terrestrial) associated with feedstock production depending on the site-specific conditions and practices.** Such a framework is capable of differentiating among feedstock production activities, rewarding reductions in net emissions to the atmosphere proportionally to what happens on the ground. Additionally, this program should ensure transactions costs low if the degree of aggregation among activities is defined together with the biofuels industry and incentivizes those with lower net emissions to provide the data to establish distinct categories, as described below.

EDF has characterized this program construction as a hybrid of options #2 and #3 presented on page 40 of the PDR. Under this program, proper accounting for carbon flux associated with the biomass will require CARB to develop information about various aspects of feedstock production (i.e., land use prior to cultivation, ground level practices). To acquire the needed data, EDF recommends CARB utilize data from on the ground measurements to accurately develop carbon flux values for bioenergy emissions accounting.

EDF encourages CARB to develop an estimation method based on aggregated empirical data for each biomass feedstock based on the particular types of production system to account for carbon values from various biomass production activities for each crop and forestry feedstock. This method must account for differences in the same feedstock produced under different conditions, and should include estimations of leakage or indirect land use change. One alternative could be to develop look-up tables similar to those developed in the LCFS and would allow CARB to deduct the net emissions reductions from the quantity of emissions released due to product combustion. Biofuel or biomass producers could be given the option of providing real data if they believe they are performing better than the values selected in the look-up tables. Crediting could be at the level of the energy producer, contingent on a certification system or other means of demonstrating the production systems on the sites from which feedstocks are sourced. Another approach would be crediting the net emissions reductions at the level of the biomass producer, contingent on delivery to an energy producer, analogous to an offsets program for bioenergy feedstock production. Alternatively, crediting could be at some intermediate stage of the production chain between the biomass and energy producer. These approaches are not mutually exclusive and each may work best in some situations. It is important for CARB to preserve flexibility in its policy development so as to find the right balance between accurate accounting and incentives and manageable transaction costs for market participants.

1.3 Treat biomass combustion consistently.

In general, CARB is proposing to avoid including biomass emissions from the cap-and-trade program in all sectors except transportation fuel. EDF recommends that the most accurate and equitable method is for CARB to treat direct and indirect emissions from biomass combustion equally with emissions from other fuels under all scenarios – stationary and mobile source combustion – and to include a consistent system to account for differences in upstream carbon impacts and land use as described above.

Treating feedstock differently based on end use is akin to deciding that some carbon dioxide molecules should be counted in the atmosphere while others are ignored. Though technically feasible, this treatment would be antithetical to the desired outcome of reducing greenhouse gases. Such a bifurcated approach would have a particularly problematic impact if scaled to the national level because of increased prevalence of biomass to energy projects in stationary source applications. If stationary sources can avoid compliance obligations by switching to biomass feedstocks regardless of the net climate implications, the net impact would likely be that bio-energy would be increasingly used in non-transportation sectors without necessarily generating all of the intended reductions in greenhouse gas emissions. Over time, this could significantly undermine the emission reduction objectives.

1.4 There is a value to minimizing regulatory complexity for entities that must comply with LCFS and cap-and-trade programs; carbon accounting for programs should be as consistent as feasible, but need not be identical.

EDF notes that the LCFS and the cap-and- trade programs are different policies aimed at different objectives. While each program should facilitate reduced carbon emissions, the cap-and-trade program delivers specified reductions (tons) while the LCFS transforms fuel type and production pathways. Nevertheless, EDF recommends CARB harmonize the emissions accounting methods to make them consistent when they cover the same aspect of the fuel cycle. However, we recognize that it may not be possible in the near term to harmonize carbon flux values used in the cap-and-trade program with the direct and indirect land use accounting used in the LCFS. Therefore, with respect to incorporating macroeconomic modeling results on indirect land use change emissions into the cap-and-trade program, EDF recommends CARB pursue such emissions only to the degree necessary to adjust offsetting activities when there are large amounts of leakage.

In addition to matching LCFS and cap-and-trade accounting methods, EDF reiterates a point we discussed in depth in comment letters delivered to CARB during the LCFS rule making. That is, since the California LCFS is a complement to an overall declining cap on emissions and should neither replace nor undermine it, we strongly discourage CARB from allowing the LCFS to generate credits that are fungible in the cap-and-trade program. Such an action would serve to reduce the potential for emissions reductions by the larger market as well as increase the uncertainty surrounding the carbon value of emission allowances. In addition, due to 1) differences in embedded assumptions within the LCFS and mandatory GHG reporting rules (i.e., GWP value of gases), 2) potential differences in the accuracy of emissions calculations between LCFS models and the mandatory reporting system (i.e., macroeconomic modeling vs. direct measurement), and 3) the LCFS's treatment of biofuel combustion emissions as carbon-neutral without performing an on-the-ground assessment of carbon sequestration at the feedstock production site, one ton of LCFS reductions will not always equal one ton of cap-and-trade emissions.

1.5 Response to PDR Question: To address the portions of fuels' emissions that are not directly covered in the cap-and-trade program, CARB should develop accurate accounting methods that eventually place these sources within the cap-and-trade program, first as offsets and then, in some cases, as a regulated sector.

In general, EDF recommends CARB move towards development of a cap-and-trade program that includes as many domestic sectors as possible and is based on accurate accounting methodology for the covered sources. As reporting methods are developed and finalized, CARB should extend the cap-and-trade program to previously uncovered industrial sources such as oil and gas exploration and production. Further, even though some sources may not directly be covered by the cap-and- trade program, CARB should seek to develop an accounting methodology for emissions when appropriate. Some sectors, such as land use, are unpractical to cap and thus should only be included in the program as offsets.

As the statewide and national cap- and-trade programs expand to incorporate more sources, the amount of emissions caused by fuel use and production which are not covered will be

diminished. As this happens, larger proportions of the fuel's upstream emissions will be incorporated into an emissions control regime.

In addition, EDF recommends CARB address the outside-the-U.S. portions via a rapid transition to sectoral offset crediting programs for major-emitting land use sectors, as discussed below in comments on Section 96400, in order to encourage rapid reductions in emissions from deforestation and degradation in other nations.

1.6 Response to PDR Question: A provision for explicit incentives for fuel-switching is not needed, but consistency across sectors and end uses, program scalability and linkability and administrative simplicity are important.

In some cases, switching fuel to less carbon intensive resources may be the most economical emissions reduction measure. Therefore, a cap-and- trade program that embeds a price signal based on carbon emissions creates a default fuel-switching incentive to the extent that the fuel being switched to is less carbon intensive and the marginal cost of switching is less than the value returned by the price on carbon. As such, no extra fuel-switching incentives need be created. Of course, the ability to perform fuel switching at the point where emissions are decreased in the least expensive manner is based on the assumption that emissions information is accurate and grounded in sound science.

1.7 CARB should strive toward consistency between the transportation sector and other sectors, scalability to a broader national cap-and-trade program, a high-degree of reporting accuracy for transportation emissions, and effective program oversight.

Environmental Defense Fund believes that CARB should strive toward consistency between the transportation sector and other sectors, scalability to a broader national cap-and-trade program, a high-degree of reporting accuracy for transportation emissions, and effective program oversight. Currently the treatment of biomass emissions is different for the transportation sector than for other sectors. For the reasons stated above, EDF encourages CARB to modify this approach and treat all emissions equally.

1.8 Pollutants with high global warming potential should eventually be incorporated into the cap-and-trade program, initially as offsets only if they can meet standards for quality, and, subsequently, as a capped sector.

In general EDF supports the inclusion of the High Global Warming Potential (GWP) sector (both ODS and ODS substitutes) in the larger market program. The PDR, however, places these emissions outside the cap-and-trade program, and only recently has the initial framework for a refrigerant reporting program been developed. The decision of the Parties to the Montreal Protocol on the Control of Substances that Deplete the Ozone Layer to postpone putting controls on HFC production, consumption, import and export, pending action by nations to regulate HFCs for their global warming potential, illustrates the importance of multiple tools to achieve emissions reductions from this sector in the near term. Thus, EDF recommends CARB

take immediate steps to develop accurate emissions reduction project quantification protocols for this sector and award offset credits where standardized criteria are met. As with any project type, the generation of offset credits must be performed using a rigorous and credible emissions reduction protocol that meets AB32 standards. For example, in the case of ODS and ODS substitutes that are already subject to controls and for which there is no current production (i.e., banks), to the extent that in the absence of offset crediting, there would be little or no market for such product, CARB should consider offset crediting using a discount.

2. Compliance Periods: Use three-year compliance periods with annual updating to minimize risk of defaults due to bankruptcy or fraud.

Choosing amongst three options for compliance periods – 3-year, 1-year or 3-year with annual true-up requirements - requires balancing the cost-minimizing benefits of longer periods with concerns that entities will default on compliance obligations in the event of bankruptcy[4]. EDF recognizes and agrees with the rationale for 3-year compliance periods as well as the benefits of annual true-ups.[5] While default is a legitimate concern, considering the benefits of longer compliance periods, EDF considers one-year compliance periods an overly invasive and unnecessary way to minimize default risks.

In general, Environmental Defense Fund considers insurance, reserve pools, and/or interim "true-ups" to be viable strategies for minimizing risk, and more attractive than shortening the compliance period to one year. Accordingly, Environmental Defense Fund supports partial true-up (option #1) as reasonable.[6] In our view, such annual true-ups should serve two purposes. First, regulated entities should demonstrate to oversight agencies their intent and ability to meet their likely compliance obligations. Second, it seems reasonable to require entities with compliance obligations to possess a significant fraction (e.g., at least 75%) of the allowances that they will need to hold at the end of a compliance period. This requirement might be relaxed if a financially sound regulated entity has insurance or demonstrates progress on investments that will yield a large number of allowances toward the end of a compliance period.

The treatment of allowance allocation will also have import for default risk. Regulated entities that receive free allowances will inherently be less likely to be in default at the end of a compliance period (though recipients might sell their allowances before the compliance period ends). On the other hand, it seems reasonable that free allowance allocation will be predicated on certain actions by receiving entities. Should oversight reveal that those actions are not being taken, then the free allowances would be withdrawn (or never dispersed), thereby resulting in a "surprise" and greater risk of default. Here, assessments at intervals more frequent than three years seem wise.

Another strategy to minimize default risks is insurance and assessment of firms' solvency. For new or potentially insolvent firms with higher default probability, insurance requirements may be appropriate. For firms able to demonstrate that default is unlikely by, for example, dedicating collateral, or firms that are demonstrating progress on long-term investments that will provide for lower carbon emissions, entity-specific exceptions for insurance may be appropriate.

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[4] PDR, page 41.

[5] Market Advisory Committee to the California Air Resources Board. Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California. June 29, 2007 at http://climatechange.ca.gov/market_advisory_committee/index.html. Page 67: "The Committee concluded that a compliance period of approximately three years in length might appropriately balance the goals of flexibility and environmental integrity."

[6] PDR, Page 41

3. Community Benefits: Market Design Can Protect and Benefit Disadvantaged Communities.

3.1 Ex-ante impact analyses are still needed to evaluate risks and opportunities for disadvantaged communities in California.

EDF is encouraged that in early 2010, CARB will produce a revised, rigorous evaluation of the potential environmental impacts of the cap-and-trade program and an examination of the potential cap-and-trade design features to reduce potential impacts. Such an analysis is at the heart of the AB32 community and environmental protections language and is required by California state law outside of AB32. The Scoping Plan provides a good start as it assessed at a large, programmatic scale, the qualitative impacts of taking action to reduce GHG emissions. A comprehensive analysis, including the development of provisions for assessing future program progress toward GHG emissions reduction goals and criteria pollutant impacts, will be needed. Tools are available to examine potential cumulative adverse impacts at the community-scale, and sociodemographic and emissions datasets are increasingly complete. CARB ought to make a clear commitment to the full development of analytical capacities to assess, and track, cumulative environmental health risks, or explain clearly why it isn't willing or able to do so. Further, an assessment of the potential impacts of offsets projects and other market mechanisms might also be performed.

The PDR states that CARB "is developing a white paper to discuss the identification of disadvantaged communities."[7] While this is appropriate, the PDR should go further in explaining how exactly the cap-and-trade program will be designed to direct public and private investment toward these communities, as required by AB32.

3.2 The program can be enhanced by inviting non-regulated entities to achieve and document emissions reductions in disadvantaged communities.

EDF has recently been exploring mechanisms to benefit disadvantaged communities through the AB32 cap-and-trade program by linking the value of avoided GHG emissions dynamically with efficiency investments in disadvantaged communities, such as appliance replacements, building weatherization and switching from private autos to public transit. The concept involves pooling and crediting reductions from small sources within capped sectors so as to transform carbon markets into efficiency investment mechanisms for households and neighborhood shops. This mechanism can generate real opportunities to seek out and reward efficiency improvements in appliances and buildings, reduced vehicle use, increased waste diversion, and inefficient appliance replacements.

Crediting reductions within capped sectors by non-regulated entities necessitates careful attention to cap-and-trade program design features that avoid double-counting reductions. EDF has identified two potential double counting concerns related to emissions accounting and

[7] PDR, pg 10.

financial rewards. First, regulated entities will simultaneously enjoy reduced compliance obligations when non-regulated entities achieve reductions through efficiency improvements. One way to address this allowance accounting concern is to set aside allowances for the purposes of crediting reductions achieved by non-regulated entities, but there are other methods as well, as discussed in Section 3.4 below.

The second potential cause of double counting is financial. If regulated entities pass on the avoided cost of compliance obligations (because reductions were achieved by a third party) to customers, awarding an allowance (or the value of an allowance) for the same activity may be double-paying the actor. While such double-payment may be appropriate in disadvantaged communities, it is an issue that merits attention. The extent of financial double counting will be reduced if regulated entities do not pass on the financial savings, either because they are constrained by cost competition or they are prohibited by law from doing so. For example, utilities cannot simply raise and lower rates at their discretion, and low-income ratepayers may already be receiving rate discounts (e.g., CARE program subsidies.)

In general, EDF sees that CARB and the PDR can be much more proactive in considering ways to design the cap-and-trade program to inspire investment in disadvantaged communities. As discussed, we recommend that one such mechanism – pooling and crediting reductions by small, dispersed sources - be considered to complement prevailing ideas revolving around a community benefits fund.[8] Our mechanism is called Climate for Community.

Through EDF's Climate for Community project, in collaboration with San Francisco Community Power, we examined the economic and technical feasibility of aggregating community level reductions. Demonstrations of this concept are already being performed in California, and similar concepts are being adopted by local air districts7 and planning departments to mitigate greenhouse gases from new development and industrial expansion. Also, similar concepts are allowed in the RGGI and EU-ETS programs. The RGGI Model Rule allows for offsets to be generated by improving overall building energy performance, or by improving the efficiency of building HVAC systems beyond prescribed benchmarks.[9] The EU-ETS allows for these types of reductions as "non-ETS offsets".[10]

Pooling and crediting emissions from small sources in disadvantaged communities will link the services of community benefits organizations with the financial investments inspired by capping emissions. EDF is interested in community aggregation to allow homes and businesses in disadvantaged communities to aggregate emission reductions and then participate in carbon markets, either directly or indirectly through proxy.[11] Participation in the carbon market will

[8] EAAC, Dec 8, 2009 Draft Report, Chapter 6: Recommendations, " Committee recommends that a fixed fraction of total allowance value devoted to investment be channeled to Community Benefit Funds to support climate change mitigation and adaptation in disadvantaged communities", page 62.

[9] See RGGI Model Rule, December 31, 2008, starting page 112.

[10] See Joint Implementation Quarterly, July 2009, Vol. 15 - No. 2, *Groningen, the Netherlands.*

[11] For information about Environmental Defense Fund's community aggregation work, see www.edf.org/C4C.

allow communities to benefit economically while reducing their emissions, creating a positive feedback loop that will inspire investment by both public and private actors.

The pooling concept is premised on the idea that opening carbon markets to third parties will benefit communities as well as regulated entities. Energy service providers, such as local governments, community groups, and business associations, can and should be provided incentives to seek out efficiency investments in low-income households and small businesses that deliver low cost allowances to the marketplace. Inspiring such a search will benefit regulated entities concurrently by providing low-cost reductions that will bring down allowance prices and potentially build goodwill with affected communities.

Other proposals to protect disadvantaged communities, such as trading restrictions and co-pollutant surcharges, are well-intentioned but would be less efficient than creating a dynamic market mechanism to find and fund reductions in these same communities. That is, rather than charging penalties for co-pollutant emissions, CARB could provide rewards for beneficial actions within these same communities. For example, entities that achieve GHG and co-pollutant reductions might receive two payments, one in the form of GHG allowance value and another payment from a different funding source (e.g., the Carl Moyer Program designed to fund criteria air pollutant reductions) to recognize the social value of reducing co-pollutant emissions. Linking funding from different pollution control programs may be new territory administratively, but these programs already are administered by CARB (though in different branches).

In sum, it is worth noting that the PDR discussion of co-pollutants acknowledges that "AB32 calls upon CARB to direct public and private investment toward the most disadvantaged communities for all AB32 programs".[12] However, while the PDR mentions a plan to "discuss the identification of disadvantaged communities", it defers to EAAC recommendations for guidance on allowance value investment. EDF agrees generally with recent recommendations by members of EAAC, and we appreciate their hard work to establish the factual basis for advising program design. EAAC is clear and correct to include private parties, amongst municipalities and utilities, as potential recipients of allowance value to invest in low-income community energy efficiency.[13] While the high-level EAAC recommendations fall short of specifying that allowances ought to be set aside for crediting community projects, an upwelling of stakeholders is converging on this idea, as summarized in Appendix A.[14]

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[12] PDR, page 10.

[13] Based on EAAC's Jan 2nd draft recommendations report. Page 54: ; EAAC's final report is scheduled to be released the same day PDR comments are due, Jan 11th \. For example, Recommendation 9, pg. 62, "The Committee recommends that ARB devote a significant share of allowance value toward financing of public and private investments."

[14] Reference our coalition letter to EAAC signed by TNC and LGSC; refer to Appendix B.

3.3 Allow for local governments and community organizations to earn reductions credits from within capped sectors if they are high quality, verified and in disadvantaged communities.

Dedicating auction revenue for a community benefits fund is one piece of a comprehensive strategy that should also create an avenue for disadvantaged communities to participate directly. A flexible, dynamic, ongoing mechanism that helps local governments and community organizations to fund reductions will create opportunities for disadvantaged communities to participate in the emerging green economy, and it will have the potential to scale up to meet the massive need for efficiency investments in under-served and under--resourced areas. These reductions cannot in all instances be classified as offsets because they may be within capped sectors. Several modifications to the PDR will be necessary to open the door to broad participation by third parties, including another subsection akin to offsets provisions that creates a pathway for yet a third type of market participant in the cap-and-trade program to provide equitably dispersed benefits of cap-and-trade.

The PDR Opt-In requirements[15] ought to allow for third parties that achieve reductions within capped (and uncapped) sectors in disadvantaged communities. Such "non-covered" entities might also be deemed eligible to receive free allocation of allowances or, as discussed below, some allowances can be set aside in a holding account for this purpose.[16]

Additional ideas in the PDR ought to be revisited to accommodate pooled community reductions. For example, the requirements that federal or state granted projects cannot earn credits[17] might be relaxed when (a) projects are taking place in disadvantaged communities, (b) projects offer significant co-benefits, and (c) grant monies fund only a portion of the project, and/or when carbon market revenues are important for project solvency. Also, while the PDR makes it clear that offset credits from outside of California will not be approved for project types in the U.S. or Canada that reduce emissions covered by the cap-and-trade program,"[18] it could make an exception for pooled reductions within disadvantaged communities in California (using allowances set aside from within the cap for this purpose).

Carbon markets can create new opportunities to close the climate gap[19] and reduce inequality by directing investment where most needed (i.e., those communities with fewest financial resources that are already suffering a disproportionate share of pollution and associated health risk). CARB should weigh carefully both the economic efficiency and the environmental benefits of competing mechanisms for providing environmental benefits in California's most disadvantaged communities.

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[15] PDR, §95840 Opt-In Participants, page 28.
[16] PDR, §8. Distribution of Allowance Value, page 47.
[17] PDR, § 96240(c)(5). Requirements for Approval of Offset Quantification Methodologies, page 64.
[18] PDR, § 96410(c).
[19] Morello-Frosch, Pastor, Sadd, Shonkoff. "The Climate Gap" report. African-Americans in Los Angeles as twice as likely to die from a heat wave than the average resident. People in the lowest quintile income bracket spends twice on water and electricity than the highest quintile as a percentage of household expenditures.

3.4 CARB should consider using set aside allowances to credit community-based reductions.

In light of the potential for double-counting emissions reductions discussed above, EDF recommends CARB consider the "setting aside" of compliance instruments in holding accounts to achieve several strategic purposes, including crediting community-scale actions by individual households and small businesses, and by local and regional governments.[20] Alternative design approaches that avoid emissions double-counting but do not require setting aside allowances do exist; EDF stands ready to assist ARB in exploring such options.

To ensure community benefits are achieved through the "set-aside" function, any project or action applying to earn compliance instruments, or the cash value of instruments, could be required to establish that they are located in disadvantaged communities and meet rigorous standards for quality. Community pooled reductions would have to be within communities specified by CARB. Reductions eligible for crediting would have to be established to be real, permanent, enforceable and additional.

To avoid double counting and ownership confusion, however, allowances can be set aside in holding accounts as the source for community credits. Unclaimed community allowances could be held in reserve for price smoothing to mitigate price spikes, purchased by regulated entities penalized for non-compliance, or sold at auction.

EDF views the PDR discussion of adjustments to the cap as providing a structure for incorporating community actions by awarding compliance instruments.[21] Whereas renewable energy credits will be removed from the cap and retired, community-pooled compliance instruments might be retired, cashed in via sale into compliance markets, or some combination of the two. To be clear, allowance holding accounts for community reductions should be distinct from early action credits and from allowances earmarked for voluntary renewable energy credits.

EDF has developed a program concept for delivering pooled compliance instruments to carbon markets. Called the Gold Standard for Equity, it details strategies for cost-competitive, rigorous demonstration that reductions are real.

Like providers and verifiers of offsets[22], CARB can develop a list of certified providers of community-pooled emissions reductions. Similarly, aggregated reductions might be funded

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[20] Additional purposes might include
- Crediting early actions that achieve real, verified reductions prior to the commencement of a compliance cap-and-trade program,
- Buffering the supply of tradable allowances to manage price volatility in unusual circumstances,
- Retirement to credit renewable power supply projects, and
- Local and regional agency decisions, such as land use plans that avoid emissions or sequester greenhouse gases, or investments in public transit, energy efficiency and waste-to-electricity infrastructure.

[21] PDR §95910(b), page 34.

[22] Cite PDR sections pertaining to certifying offsets providers and verifiers

among "investments to achieve the goals of AB32 and other public spending programs".[23] Whereas the PDR includes using allowance value to compensate for harms in communities historically impacted by air pollution, EDF urges CARB to make every effort to avoid harm and to incentivize actions that deliver benefits to disadvantaged communities.

3.5 Allocating allowance value to benefit disadvantaged communities, either as dedicated auction revenue or as an allowance set-aside, can and should be done in a manner consistent with other priorities for the distribution of allowance value.

Environmental Defense Fund recognizes that there are a range of other allocation priorities in addition to providing support for disadvantaged communities, including broad-based allocation to consumers and judicious use of free allocation to assist regulated entities in making a transition to a low-carbon economy. EDF recognizes that these issues are not addressed in the PDR, and looks forward to working with ARB as it considers the recommendations from the Economic and Allocation Advisory Committee.

[23] PDR, §8, discussion box, pages 46 & 47.

4. Offsets

Environmental Defense Fund commends CARB for including greenhouse gas emissions offsets in the AB32 cap-and-trade program. We understand the PDR envisions three avenues for offsets to be credited. First, CARB would approve offsets issued by other institutions and frameworks that meet standards established by the Board. Second, CARB could directly approve offset projects and issue credits. Third, CARB would enter into international agreements to accept offsets and sector-based credits located in foreign jurisdictions. Volumes of offsets available for purchase and use by regulated parties in the cap-and-trade program will be determined by availability of projects and protocols, but cannot exceed Scoping Plan quantitative limits approved by the Board.

4.1 Limit offsets use by quality, not quantity.

EDF has consistently provided comments to CARB expressing our concerns about using arbitrary limits to temper the amount of available offsets for use in the AB32 cap-and-trade program. Our view is that offsets represent real reductions when crediting is predicated on rigorous quality standards and that offsets provide a critical cost containment mechanism. Therefore, we recommend fully utilizing high quality offset credits rather than restricting them. We explain our thinking below, and we look forward to working with the agency to ensure high quality offsets are generated in each of the three pathways discussed.

4.1.1 Interpret the 49% offset limit to allow for broadest possible use of high quality offsets.

On April 30, 2009, EDF provided a letter to CARB that recognized the 49% quantitative limit on offset compliance instruments as a reasonable (and perhaps legislatively required) middle-ground for using offsets, but we also urged the Board to interpret the limit in a manner that would allow for broad inclusion of offsets in the program. Further, in that comment letter we recommended CARB consider allowing entities compound the offsets limit across all prior compliance periods starting in 2012. EDF reasserts these suggestions here and supports the elements of the PDR which identify the paramount need for high quality credits and interprets the limit across all compliance periods as we've suggested.

Aside from the overall (economy-wide) use limit, the PDR proposes to limit offsets to 4% of each entity's compliance obligation. This amount is based on CARB's calculation that ensures a majority of the emissions reductions occur as capped sector reductions rather than offsets.

As a general statement, EDF observes that calculating the offsets limits as a function of required emissions reductions is problematic because it relies on uncertain "counterfactual" estimates of business-as-usual emissions. In the alternative, basing the offsets limit on the compliance obligation is easier to measure and enforce because any offsets limit would be based on data submitted to the Board and verified.

While EDF has supported the 49% offsets limit established in the Scoping Plan and adopted by the Western Climate Initiative, we do not recommend or support the 4% entity use limit identified in the PDR. Although we recognize that CARB is endeavoring to create an offsets limit that meets legal, social and political needs, creating an arbitrarily low tolerance for offsets may undermine the ability of the state to contain program costs, devise an administratively feasible program and create linkages to other cap-and-trade programs. Of worthy reference is the fact that the 4% limit is considerably lower than the approximately 30% fraction allowed for offsets in the early years of Federal proposals.

As an alternative to the 4% entity use limit outlined in the PDR, EDF recommends CARB rely on an overall supply limit. Further, if CARB determines an entity use limit is necessary, EDF recommends that use limit be relaxed over time to allow for more offsets into the cap-and-trade system. As improved awareness of offsets quality is generated, the certainty of emissions reductions generated by emissions offsets will be also improved.

4.2 Accept offset credits from outside California state government that meet rigorous quality standards established by CARB.

In general, EDF is supportive of CARB's proposal to accept offset credits from protocol and project crediting organizations outside of the California state government. As a threshold requirement, protocols and projects developed by outside institutions would have to meet rigorous quality standards established by the agency. While the preliminary list currently included in the PDR[24] is a general starting point for identifying potential project protocols available for adoption by CARB, we recommend CARB also look to look to the lengthier discussion included in Subarticle 13 of the federal climate bill for guidance.

With regard to the specific project credits identified in the PDR, EDF does not seek to opine in any blanket way in this letter on the adequacy of WCI allowances, WCI offsets, or Climate Action Reserve allowances and offsets.

With regard to the concerns stated in the PDR about Clean Development Mechanism (CDM) offsets (Certified Emissions Reductions (CERs)), EDF concurs. At Copenhagen in December, several major developing countries made voluntary commitments on climate change. The world's fourth largest emitter, Brazil, made a voluntary pledge to reduce its absolute national emissions, and has subsequently enacted national legislation enshrining that pledge. In our view that sets the bar.

Accordingly, it is EDF's view that CERs from major emitting sectors in major emitting developing countries, if allowed into the program at all, should be allowed only for a limited initial period of time, i.e. January 1, 2016, as stated in H.R. 2454, which passed the U.S. House of Representatives in June 2009. After that time, only sectoral credits from such countries' major

[24] PDR, page 29.

emitting sectors should be eligible for recognition by ARB. In no case should project-based credits from nations with sectoral limits be eligible for recognition by ARB.

With regard to the offset protocol standards identified in the PDR that may be adopted by the Board, we take this opportunity to provide recommendations and to request more information:

4.2.1 CARB should review and approve offset project protocols from others until national or international bodies are established to do so.

EDF supports CARB's proposal to accept credits issued by other organizations and delegate responsibility for emissions verification and project oversight so long as the delegated entities and protocol bodies meet specified standards, are reliable and accountable to CARB, and that CARB retains enforcement authority as required by law. However, until offsets crediting and verification bodies are accredited by the United States or California state government, EDF recommends CARB take an active role in reviewing and approving individual project protocols to ensure that they meet CARB's standards. To date, the CARB approval process of the Climate Action Reserve protocols has served as a reasonable model for oversight and interaction, so EDF encourages the agency to continue.

4.2.2 More explanation is needed about offset protocol requirements to address health, welfare, social, economic or energy effects.

We respectfully request more information about the meaning of this provision.[25] Specifically, what does the word "address" mean in this context? Do projects need to identify potential health, welfare, social, economic or energy effects? Must they minimize them and/or mitigate them?

4.2.3 Ensure permanence from terrestrial sequestration offset projects by linking them to a buffer pool (or similar insurance mechanism).

On July 6, 2009, EDF provided comments to CARB related to ensuring permanence of credits generated from terrestrial sequestration projects. One mechanism we recommended was the requirement that any protocol CARB adopts for terrestrial sequestration be linked to a buffer pool (or similar insurance mechanism), akin to that developed for the Climate Action Reserve Forestry Project Protocol. EDF continues to support this position and recommends the establishment of clear liability for project reversals and the requirement of third-party insurance or other mechanisms to insure against potential project reversal. Although the discussion in the PDR related to reversal of offset credits could be read to incorporate this idea[26], EDF encourages the agency to be specific about the need for such mechanisms as an upfront determinant for whether the protocol could be adopted by the agency.

[25] PDR, page 29.
[26] PDR, page 63.

EDF also supports the establishment of a system of credits that extend for a pre-determined crediting period, with the persisting requirement to replace those credits with a valid form of compliance, from the same or different source, at the end of the crediting period. This will help address the risk of reversals and ensure a more flexible and workable offsets system.

4.2.4 More explanation is needed about requirements that offsets projects create "no net harm".

In general, EDF supports the no-net harm approach to qualifying offsets projects because it engages project developers to mitigate coincident negative environmental impacts associated greenhouse gas reduction efforts. However, we also recognize that a no-net harm approach should be designed so as to avoid being overly restrictive and leading to the exclusion of valuable emissions reduction projects. EDF therefore respectfully requests more information on the meaning of the provisions for "no net harm".[27] Specifically, does this provision apply to each emissions/pollution type, or every potential environmental and human health impact?

In furtherance of the no-net harm approach, EDF recommends CARB examine the potential to require projects located in sensitive natural areas that are globally or state-level ranked as threatened, endangered, or rare provide demonstration of a management plan that show that overall ecosystem health will be maintained or improved. Such requirements should also apply to land-based projects located in other sensitive ecosystems or that contribute atmospheric emissions. For example, for projects that emit air pollution, CARB may want to consider requiring projects not cause or contribute to criteria pollutant non-attainment.

4.2.5 Treatment of uncertainty in offset protocols requires more explanation.

We respectfully request more information on the meaning of the provision in the PDR to account for uncertainty in offsets protocols.[28] Specifically, EDF requests CARB examine and answer whether an accounting for uncertainty is intended to address accuracy or precision? Depending on the intent the resulting treatment could be very different. For example, low precision is much less of a concern than low accuracy and does not require any discounting. Low precision however does require aggregation to ensure credits are awarded appropriately. Low accuracy on the other hand would require assurances to preserve credit worthiness or risk undermining the integrity of mandated reductions.

On a related issue, the PDR requires that "the Offset Project Operator must employ procedures for monitoring measures for non-sequestration offset projects with an offset uncertainty of no more than +/- 5 percent."[29] EDF respectfully requests clarification in whether this percentage

[27] PDR, page 65.
[28] PDR, page 65.
[29] PDR, §96290, page 71.

refers strictly to standard sampling error, to measurement error, or a more holistic assessment of uncertainty?

4.3 In the initial phase of the program, CARB should directly credit projects and accept high quality credits from other programs.

As discussed in the PDR, perhaps the type of emissions reduction project held in highest regard by the public will be from projects directly credited by CARB, rather than adopted by reference from another credit approval institution. However, a process for credit issuance developed and run by CARB will be time- and resource-intensive. Further, if this were the sole method for generating offset credits for the cap-and-trade program, it is likely that California will face a scarcity of high quality credits in the early years of the program. Therefore, EDF supports the CARB proposal to credit projects directly, but also recommends it be combined with other offset generation methods as described in the PDR.

With regard to the issues identified in the PDR on project types able to be credited under this mechanism, we take this opportunity to provide recommendations and requests for more information:

4.3.1 Allow offsets from the U.S., Canada, and Mexico consistent with WCI recommendation.

In the PDR, CARB discusses 4 proposals for limiting the direct crediting of projects based on geographic location. 1) Projects located in California, 2) Projects located in the United States, 3) Projects located in the United States, Canada and Mexico (reflects WCI recommendation). 4) ARB issues offset credits for projects internationally.[30]

In general, EDF supports option # 3 (the U.S./Canada/Mexico option consistent with WCI recommendation). However, CARB may want to revise the language of the PDR to allow credits only from areas / sectors of U.S./CAN/MX that do not have existing carbon markets rather than the economy as a whole. A discussion of the use of REDD credits in the cap-and-trade program is included in another section of this letter since EDF did not interpret these 3 options as incorporating the REDD program.

4.3.2 Where California regulations are more stringent than those in other jurisdictions, a better solution than exclusion from offsets eligibility is modification of mandatory emissions reductions in the other jurisdiction.

[30] PDR Page 67

The PDR questions when an offset project outside of California can be considered additional if it would otherwise be required in California.[31] Although California may have regulatory standards that prohibit a particular emissions reduction project from receiving offsets credit (because the project was required by law), such a fact should not disqualify the same type of project occurring elsewhere from receiving credit if it meets the requirements of an approved project protocol. In cases where California regulations are more stringent than those in other jurisdictions, the solution to the disparity should not be exclusion of valid emissions reduction project offsets, but rather, modification of the mandatory emissions reductions regulations that are applicable. As an example, EDF is working to ensure the US EPA undertakes a review of the NSPS standards applicable to landfills to improve the national standards related to landfill gas capture and energy generation.

4.3.3 Allow for regulatory verification of offset project credits directly approved by CARB.

Offset project performance and assuring credit validity are key issues for the success of the overall market program.[32] EDF therefore supports regulatory verification of offset project credits directly approved by the agency. However, to reduce costs and maximize efficiency of project verification and oversight, we also support the delegation of regulatory enforcement to 3rd party operators / contractors. Selecting the best oversight mechanism will require a balance between creating too high overhead for project verification and ensuring project credibility.

4.3.4 Acceptable oversight will involve annual verification of offsets credits.

EDF respectfully requests a description of the meaning of provisions for offsets verification timetables.[33] CARB should provide example verification timetables. In general, annual verification of offset credits is the accepted method for oversight. CARB should therefore provide reasoning and context if it determines that an annual verification is not needed.

4.4 Allow international sector-based offsets that meet stringent quality criteria

EDF supports the PDR's proposal to accept international offsets generated through sector-based crediting mechanisms. The ability of international emissions reduction projects to achieve reductions at low cost is critical to achieving global climate stability and is a valuable opportunity to achieve partial compliance with statewide emissions reduction goals. However, as stated above, in no case should project-based credits from nations with sectoral limits be eligible for recognition by ARB.

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[31] PDR Pages 67-68.
[32] PDR Page 67.
[33] PDR Page 72.

4.4.1 In addition to domestic offset projects, give preference to offset projects development in the world's least developed countries.

Under the PDR, offset projects located in the world's least developed countries will be given preference for development of credit generation protocols.[34] EDF is supportive of this approach for activities at the project level as it emphasizes areas of the world that can benefit socially and economically from investments in greenhouse gas reduction projects. Such nations are representative of the international environmental justice community and offer an opportunity for California to combat climate change and help fellow humans. Further, since least developed countries do not tend to emit large amounts of emissions, there is little risk that international investments for exclusively project-based activities will undermine international reductions by way of providing incentive to avoid accepting carbon caps at national or sectoral levels.

In addition to providing preference for projects in the world's least developed countries, CARB should help facilitate development of emissions reduction projects in domestic environmental justice communities. Such projects support the community benefits requirements of AB 32 and will be important to create improvements in disadvantaged communities and generate public support for the overall program. Further, preferences for project development in California's disadvantaged communities can and should be married to mechanisms to promote purchasing of credits from these communities.

4.4.2 Limit the use of offset credits from the Clean Development Mechanism.

EDF agrees with the concerns about the Clean Development Mechanism noted in the PDR, and supports the PDR's proposal to limit the allowable use of CDM credits (i.e., Certified Emissions Reductions or, CERs).[35] In particular, CERs from major emitting developing countries, if allowed into the program at all, should be allowed only for a limited initial period of time while a sector-based crediting mechanism is being developed. EDF recommends that ARB set a specific end date for the use of CERs from sectors and countries that are suitable for sector-based crediting, e.g., January 1, 2016 as included in H.R. 2454, passed by the House of Representatives in June of 2009.

As discussed above, to the extent that CDM projects located in least developed countries generate credits, as long as those projects meet rigorous quality standards, they can and should be considered.

[34] PDR Page 81 -§96420
[35] PDR Page 77

4.4.3 Sector-based crediting should be limited to major sectors, and careful attention must be paid to the determination of baselines.

EDF supports the concept of sector-based crediting, especially for REDD projects but also for other sectors, as discussed further in the following subsections. However, to ensure full environmental integrity, provide adequate incentives for developing countries to take steps to reduce their emissions, and to minimize concerns about emissions leakage, sector-based crediting should be defined only for sectors that represent a significant fraction of a nation's total emissions.

Furthermore, the determination of sectoral baselines is crucial to the effectiveness and perceived legitimacy of sector-based crediting. EDF therefore strongly recommends that sectoral credits be awarded only for reductions in absolute GHG emissions. We support the intentions behind the PDR's proposal that "the crediting baseline for the relevant sector must be established at a lower level of GHG emissions than would occur under a business-as-usual scenario." However, given the many practical difficulties and ambiguities involved in projecting "business as usual" emissions, EDF recommends that CARB consider the alternative approach of defining sectoral crediting baselines on the basis of estimated historical emissions for the sector.

Moreover, EDF notes that the PDR currently gives no guidance on how far the baseline must be below "business as usual." EDF recommends that CARB require sectoral crediting baselines be shown to be consistent with an overall environmental goal of limiting the rise in mean global temperatures to two degrees (and/or limiting atmospheric concentrations of greenhouse gases to 450 parts per million).

EDF also observes that it may be could be difficult to demonstrate that the risk of leakage in the sector is greater if the credit is issued on an individual project basis.[36] This could be a significant transaction cost without commensurate increases in offsets reliability. We therefore suggest that the requirement can be deleted.

4.4.4 Encourage international sectoral credits from Reducing Emissions from Deforestation and Forest Degradation (REDD).

EDF commends CARB for acknowledging the importance of international sectoral credits in the PDR, and in particular, REDD. Deforestation and forest degradation represent 15% - 17% of annual global greenhouse gas emissions. Scientists concur that large-scale reductions in deforestation will be necessary to keep global warming below 2°C and avoid dangerous climate change. Over the last 18 months, the Governors' Climate and Forests Task Force (GCF) launched by California and including US, Brazilian and Indonesian states and provinces, has made substantial progress toward formulating criteria for use of REDD in US compliance markets.

[36] PDR, §96430 (c)(5). Page 82.

The use of REDD from effective national, or large-scale sub-national deforestation reduction programs (e.g., on the scale of Amazonian or Indonesian states) using advanced monitoring and measurement technology offers low-cost abatement of very high environmental quality and should be strongly encouraged. National and large-scale sub-national deforestation reductions below absolute historical baselines that are achieved, demonstrated with modern remote sensing technology, and independently verified, are emissions reductions and should therefore be eligible for emissions trading (section 96160). Further, offsets from stand-alone REDD projects should be allowable in smaller tropical countries, along the lines defined in H.R. 2454, and should meet the standards established in the Climate Action Reserve Forest Carbon Protocol. For reference, incentives for countries to adopt national-level deforestation reduction programs, as well as limitations on project-level offsets are clearly defined in H.R. 2454.

California's inclusion of REDD credits in the cap-and-trade program will be critically important for the worlds' tropical forests, and will be an extremely important signal in the world's major tropical forest regions. REDD discussions have advanced in the United Nations Framework Convention on Climate Change, and robust REDD provisions were included in H.R. 2454, while developed countries have begun to commit and provide funds for "REDD Readiness". This has sparked enormous interest in tropical governments and forest communities around the world, where expectations that standing forest may come to represent an asset are rising.

As an example of the benefits that REDD can provide, Brazil, responsible for nearly half of global deforestation from 2000 – 2005, in 2009 recorded the lowest national deforestation on record in the 21 years that it has measured the phenomenon. Large part of the reduction was registered in Mato Grosso, Brazil's leading soy and cattle producer. Many observers (including state Governor Blairo Maggi speaking on a panel at the Copenhagen climate conference) attribute part of the historic decline to producers' expectation that reducing deforestation will become valuable. Thus, California, even as a relatively limited market with restricted use of emissions trading and offsets, has a strategic opportunity to create the price signal that can help keep deforestation going down in the Amazon, and encourage other countries to build the monitoring and governance capacity needed to control deforestation. Therefore, EDF recommends CARB move to adopt robust compliance standards for national and state level REDD programs.

4.4.5 CARB should award sector-based offset credits only for measured reductions in absolute emissions, not reductions in intensity or compliance with technology standards.

As the PDR recognizes, a crucial issue in the design of a sectoral crediting mechanism is the definition of how credits are generated and the determination of a relevant baseline. The PDR contemplates three specific measures for sectoral crediting: absolute GHG emissions, sectoral intensity, and technology standards. EDF strongly recommends that ARB award sectoral offset credits only on the basis of reductions in absolute GHG emissions, measured in tons, and **not** on the basis of intensity-based or technology measures. Intensity-based measures allow absolute

emissions to increase. As a result, intensity-based measures are insufficient to meet the long-term environmental goals of reducing emissions by enough to avoid dangerous anthropogenic climate change. In addition, intensity-based measures greatly complicate the task of measurement and verification as not only emissions but emissions plus another variable (e.g. GDP) must both be measured and verified to determine emissions intensity.

More importantly in the current context, allowing for intensity-based trading will undermine the effectiveness of California's own program. That is because a reduction in intensity is not comparable to an absolute reduction in emissions. As a result, allowing regulated entities under California's program to use an intensity-based credit to satisfy a compliance obligation will effectively loosen California's cap.[37]

Meanwhile, technology-based standards are another step removed from actual emissions reductions. While technology-based standards may prove to be suitable near-term policy instruments in some sectors and in some countries facing institutional or other constraints, they are not suitable as the basis of a trading or offset crediting program. Furthermore, technology-based standards do not guarantee specified reductions since new, more efficient technology may be used more, thus leading to net increases in pollution.

The bottom line is that there is no substitute for actual, verified emissions reductions in absolute terms. Those emissions reductions may appropriately be achieved through a variety of policy measures, including technology standards, depending on the circumstances and capacities of individual countries and sectors. But in no case should compliance with a technology standard or intensity standard — *in the absence of demonstrated, verified reductions in absolute emissions* — be allowed as the basis for the award of offset credits used for compliance by regulated entities under a cap-and-trade program.

4.5 Using bilateral agreements, CARB must ensure that emissions reductions used to generate offsets from other states and nations are verified and enforced.

CARB needs to be sure that offsets in other states and nations that are used in our compliance market are verified and enforced. To do so, the jurisdictions must prove that they will be able to monitor and enforce the offset projects and the provisions of the bilateral agreement. Such enforcement must be written into a Memorandum of Understanding (MOU). The MOU should establish liability and insurance requirements and also govern the terms of any dispute, requiring arbitration set up through NAFTA or the International Arbitration Association, as well as specific compensation requirements if the offsets are found to be non-compliant.

[37] See the work by Carolyn Fischer of Resources for the Future on this issue, e.g. "Combining rate-based and cap-and-trade emissions policies," *Climate Policy* 3S2: S89-S109 (2003). "We find that allowing unfettered trade between rate-based and cap-and-trade programs always raises combined emissions — regardless of the direction of trade — when the product markets are independent." Fischer 2003, p. S92.

Cooperative enforcement agreements between and among the U.S. states via their attorneys general, as well as between and among nations under mutual legal assistance treaties (MLATs) administered by the U.S. Department of Justice, can provide useful models. Most importantly, the MOUs should provide for mutual inspection. Specifically, Section 96420(e) of the PDR should insert the capitalized phrase as "…if a cooperating regulatory agency from the country, state or province has entered into a MOU with California to carry out certain obligations related to offset projects located in their jurisdiction. This includes, but is not limited to, the obligation to perform audits of offset project sites, TO ALLOW FOR MUTUAL INSPECTIONS OF PROJECT SITES, and to report and enforce against violations of this subarticle."

One possibility might be to seek to negotiate MOUs under which a providing country would agree to surrender offset credits on behalf of its providers that fail to deliver quality offsets, (and if the shortfall is not covered by other insurance mechanisms), and then seek compensation from those providers without the involvement of CARB. Additionally, California should retain the right to pull out of an agreement with a foreign country if it does not believe that the foreign country is operating its program properly (i.e., it is not enforcing its monitoring and reporting protocols or is not penalizing sources that are cheating).

4.6 Allow unused quantitative offsets limits to carry over between compliance periods.

EDF supports the ability of regulated entities to carry over offsets they purchase or generate in one compliance period into the next period. The current proposal has these credits being surrendered and retired if they are unused unless they are in the hands of the offset credit developer.

5. Cost Containment: A well-designed cap-and-trade program is the best way to achieve emissions reductions quickly and cost effectively.

5.1 EDF strongly supports the PDR's proposal not to include a "hard" price collar or safety valve.

Attractive strategies to contain compliance cost include a broad, multi-sector program with offsets that are verifiable, additional, and address the risk of reversals. Offsets allow sources not regulated under a cap-and-trade system to help achieve greenhouse gas reduction goals, and create important incentives for new innovations that result in reduction, storage or elimination of greenhouse gas pollution.

Allowance price ceilings — "hard" price collars also known as *"safety" or "price" valves* — undermine climate and energy security by violating the environmental integrity of the cap. In addition, restrictive price collars interfere with price discovery by the market and limit the returns to technological innovation, leading to higher abatement costs in the long run. They also raise concerns about vulnerability to strategic manipulation of allowance prices by market participants. For all these reasons, a hard price collar undermines the effectiveness of the cap-and-trade program, and should not be included in California's cap-and-trade program. EDF applauds the PDR for ruling out a safety valve[38].

5.2 Many features of a well-designed program will actively and effectively contain compliance costs, such as broad economy-wide coverage, high quality offsets, multi-year compliance periods, banking, and other strategies for flexibility and liquidity.

Many opportunities are available to manage costs while securing the reductions necessary for climate stabilization. These tools include strategies to maximize market flexibility and liquidity, and larger oversight structures to ensure market stability and support low-carbon opportunities. Specific opportunities include:

Start now. Initiating reductions in global warming pollution as soon as possible allows time for the transition to a low-carbon economy to be gradual, giving firms ample time to adapt and transition to climate-friendly practices and technologies. In contrast, delay will increase the pace of reductions necessary to reach climate stabilization, meaning that the transition to a low carbon-economy will have to be a hastier effort, as shown in Figure 1.

Cover as many sectors as possible. A broad range of sellers and buyers will increase the liquidity and flexibility of the market and will help to mitigate massive price fluctuations. A diversity of sources of allowances will also provide a variety of opportunities to identify cost-effective emissions reductions.

[38] PDR, page 50.

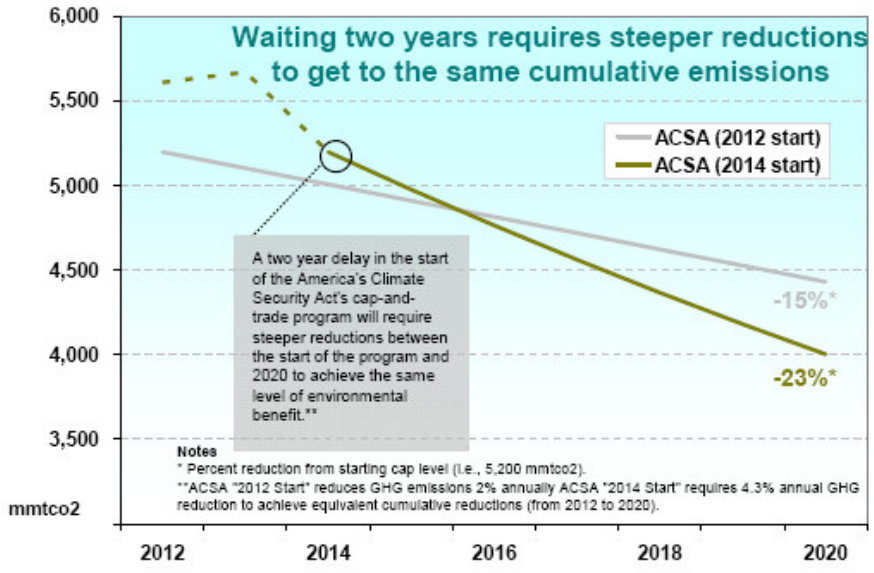

Figure 1: Delaying action on climate change requires steeper reductions to reach climate stabilization.[39]

Emissions offsets from uncapped sectors. Another opportunity to minimize economic impacts through cap-and-trade design is to allow high quality emissions offsets from non-capped sectors. As discussed in the offsets section of this letter, such offsets must be certified with rigorous criteria to ensure the integrity of emissions reductions. Paired with protective, long-term emissions reductions caps, appropriate use of emissions offsets can offer an additional tool to manage costs and inspire development of carbon accounting methods that enable new sectors to be included within the cap.

Borrowing and banking. Banking gives firms with excess allowances at the end of a compliance period the choice of saving these allowances for use in future years. Borrowing allows firms to use emissions allowances from future years if they conclude that achieving emission reductions or buying allowances in later compliance periods will likely be more cost-effective than doing so during the current period. If allowed, borrowed emissions should be discounted (equivalently, interest should be paid on borrowed allowances) to reflect the importance of achieving emissions reductions as soon as possible.

Borrowing and banking allows firms to 'trade' allowances across time, giving firms the flexibility to achieve emissions reductions at the most cost-effective time period. Banking emissions allowances further increases the liquidity of the market by letting allowances of different vintages become close substitutes.

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[39] The data used to derive this chart are from the national allowance account for the years 2012 – 2020 from the introduced version of S.2191, America's Climate Security Act of 2007. The emissions growth from 2005 to 2013 is assumed to be 1.1% (which is the average of the 2004 and 2005 rate; http://www.epa.gov/climatechange/emissions/downloads06/07ES.pdf). Chart and information from Statement of Fred Krupp, President of Environmental Defense Fund, regarding America's Climate Security Act, submitted to the U.S. Senate Committee on Environment and Public Works on November 15, 2007.

Multi-year compliance schedules. Multi-year compliance schedules provide regulated entities with greater flexibility for timing compliance. Along with banking and borrowing, multi-year compliance schedules help regulated entities make staggered investment decisions work within a gradual compliance pathway, and may enable firms to avoid near-term investments that lock in suboptimal technologies or practices.

Incentives for low-carbon technologies. Research and development will play an important role in advancing cutting-edge low-carbon opportunities. Targeted public and private programs could facilitate firms' adoption of transformational technologies essential for transitioning to a low-carbon economy and for delivering low-cost reductions.

5.3 A combination of additional cost containment mechanisms, including an allowance reserve along with provisions to increase the allowable use of offsets and expand borrowing, can provide an effective means of limiting unduly high allowance prices while preserving the environmental integrity of the program.

In its discussion of cost containment mechanisms,[40] the PDR discusses four options which could be used in concert: (i) an allowance reserve, (ii) an increase in allowable offsets, (iii) an expansion of eligible activities under the offset program, and (iv) increased borrowing. EDF strongly supports options (i) and (ii), and notes the potential utility of option (iv). We consider each of these in more detail below.

(i) An allowance reserve can provide an effective "first line of defense" against unexpectedly high allowance prices. EDF supports the use of such a mechanism and recommends that in designing such a reserve, ARB consider the following issues. First, the size of the reserve as well as the quantity of allowances that may be withdrawn from the reserve in any given year must be limited, with those limits consistent with the overall environmental integrity of the program.

Second, as a corollary to the first point, the reserve should be "stocked" with new allowances only once, at the start of the program. The reserve can subsequently be replenished by purchasing high-quality offsets that represent verified emissions reductions and converting them into reserve allowances. (Such purchases could be funded by the revenues generated by selling allowances out of the reserve when prices are high.) The reserve might also be replenished with unsold allowances from regular auctions, if a reserve price is used for those auctions, as suggested in the PDR.

In no event, however, should the reserve be replenished repeatedly with newly generated allowances taken from "on top of" the cap. An unlimited allowance reserve, or one that can be replenished again and again with new allowances, is functionally equivalent to a safety valve, and shares the same crucial drawbacks.

[40] PDR, page 50

Third, the conditions under which the reserve allowances will become available should be clearly specified in advance, in order to provide transparency and predictability to market participants. One approach is to determine a trajectory for a "price trigger." The price trigger should rise in real terms (i.e., over and above the rate of inflation). When allowance prices exceed this threshold for a defined period of time, the allowance reserve would become available. Alternatively, the price trigger could be defined as a minimum (reserve) price in a periodic auction of reserve allowances. If the latter approach is used, however, safeguards must be put in place to prevent against market manipulation.[41]

(ii) EDF also supports increasing the maximum allowable number of offsets as an additional cost containment mechanism. This would seem an especially appropriate mechanism in light of the PDR's very stringent proposal to allow regulated entities to submit offsets for less than 4% of their compliance obligation. For example, a cost containment mechanism could be to increase that entity-level limit to 10% or even 15% under certain conditions. Such an increase in allowable offsets could be automatically triggered by the allowance price exceeding a certain threshold, or could be left to the discretion of the regulator.

(iii) Of the four cost containment options under consideration, an expansion in the *types* of offset credits accepted for compliance appears to be the least suitable approach, for at least two reasons. First, there is a clear threat to the integrity of the program. Offset projects should be allowed if and only if they can be shown to provide real, verified, and additional emissions reductions. Any project types that can do so should be included in the program from the outset, without waiting for allowance prices to exceed some threshold. Any project types that cannot meet those criteria should not be allowed into the system regardless of allowance price levels.

Second, expanding the types of acceptable offset project types is unlikely to be an effective cost containment mechanism. Project developers are unlikely to invest in offset projects that are not initially allowed under the program's regulations merely on the basis of speculation that they *might* be allowed in *if* allowance prices are unexpectedly high. Moreover, to be effective a cost containment mechanism must be deployable at short notice, and must be easily shut off once the need has subsided. Expanding the list of allowable offset project types is likely to fail on both grounds: it will involve a long lag time to generate new allowances and will be hard to shut down once it is no longer needed.

(iv) Finally, EDF notes that ARB might explore the possibility of (and need for) relaxing constraints on borrowing from future compliance periods as an effective cost containment mechanism. In principle, EDF believes that implicit borrowing options, notably multi-year compliance periods, should obviate the need for additional borrowing provisions in the cap-and-trade program. If interperiod firm -level borrowing is contemplated as an additional cost

[41] For example, some analysts have cautioned that making allowances available to anyone willing to pay the reserve price, regardless of the market price, will invite manipulation and gaming: firms with short positions in the allowance market (who would benefit from a fall in price) could purchase reserve allowances at the minimum reserve price, even when the market price of allowances is below the reserve price, in order to increase supply and depress the market price further.

containment mechanism, then three provisions can address the reasonable concerns about default risk and "cascading": first, entity-level borrowing should be subject to interest (e.g., by requiring more than one allowance to be borrowed for each ton of compliance obligation met, with the increase determined by the effective interest rate); second, borrowing should be allowed only from the near term, i.e. one compliance period in advance, and should not be allowed from further in the future; third, any single entity's borrowing should not be allowed to exceed a cumulative allowable limit (i.e. a debt ceiling).

6. Enforcement: Non-compliance penalties must inspire high rates of compliance and be fair to regulated entities and offset providers.

6.1 Financial penalties for non-compliance should be sufficient to inspire high rates of compliance.

The enforcement of the cap-and-trade program must be designed so that it is more financially attractive to comply than to not comply.[42] Enforcement features must also aim to make the atmosphere whole. Consequently, it is essential that any non-complying source be required to submit compliance instruments to make up for the non-compliance. In addition, the State should impose an automatic penalty in addition to the true-up mandate. This penalty needs to be large enough to discourage non-compliance. WCI, RGGI, EU-ETS all have penalty in the form of allowance ratios, such as 3 allowances for every one not presented by the regulated entity. Additionally, the SO_2 program levies a penalty of $2000 per ton — roughly 10 times the price of an allowance over much of the program's duration. Penalties that cost the regulated entity several times more than allowances create a strong incentive to hold adequate allowances, while requiring payment to be in form of allowances "corrects" the lost benefits from prior years. Repeated episodes of non-compliance should result in larger penalties.

6.2 Well-timed allowance auctions can provide allowances for regulated entities falling short during the true-up period.

CARB should design allowance auctions to ensure that a sufficient fraction of allowances are available for purchase after the compliance obligation is known but before regulated entities are required to surrender allowances. This provides a simple solution to the potential problem of regulated entities finding themselves unexpectedly "short" of allowances, which could threaten the overall ability of the program to meet the cap.

6.3 Several strategies can eliminate risks posed by offsets that are deemed retrospectively to be of poor quality at no fault of the buyer, including reserve pools and insurance.

The treatment of offsets that are purchased and later found to fall short of standards requires careful consideration because often the failure of an offset to meet standards is beyond the control of the purchaser. CARB is envisioning different ways to verify offsets – some offsets will be verified by CARB, and some will not. As discussed in the following paragraphs, offset enforcement should be treated differently based on the expectations of the buyer and the goals of the state.

To the extent that offsets are verified directly by CARB, the purchaser should be allowed to rely on CARB's determination that these credits meet its own standards. That being said, the failure of an offset cannot be allowed to increase net emissions over what is allowed under the cap. CARB should take steps to mitigate the risk that CARB-certified offsets are later compromised.

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[42] PDR, §96500 et seq, p. 85.

Mitigation could be done in a number of ways and should be designed to make transactions easy in the open market. It could be made similar to the envisioned federal design by including a built-in insurance program into the issuance of offsets, with the ratio dependent upon the risk associated with the project. For example, CARB could require 1.05 tons of offset credits to be surrendered for every ton of compliance obligation. The 5% increase could be placed in an account that is available for surrender if offset credits are later reversed. As the risk of reversal for offsets becomes clearer, the percentage of additional offsets that CARB requires covered entities to submit could be adjusted.

The program for offsets certified by entities other than CARB must also be designed to ensure that non-compliant offsets do not lead to under-compliance with the cap. According to the PDR, CARB will be certifying third party protocols, in addition to working directly on MOUs with other states and foreign nations for the provision of offsets. One way to do this is to require buyers to surrender additional offsets credits for offsets that are later found to fall short of standards. These credits can be secured through buffer-pools that CARB requires be connected to various offsets types (i.e., terrestrial sequestration projects), third party insurance, or other insurance mechanisms. Further, the development of novel insurance mechanisms (and requirements for purchase) is common in international transactions.

By CARB requiring "insurance" for credits form other organizations, combined with the mechanism for CARB-certified offsets, the program as a whole should have significantly reduced transaction costs due to offset credit invalidity. Additionally, contracts and MOUs should support the replacement of the offsets that are found to be non-compliant, which can be used as replacements of insurance pools by CARB in future compliance periods.

In any event, EDF looks forward to working with CARB to investigate and develop mechanisms to ensure emissions reductions while ensuring market fluidity and credit availability. Further, EDF recommends that CARB develop specific rules for offset providers, whereby, at a minimum, providers who repeatedly fail to produce quality offsets should not be allowed to trade on compliance markets. Further, EDF recommends CARB provide a list of providers be kept and shared with international market regulators. In addition, any penalties should be in addition to contractual and MOU requirements to replace non-compliant offsets.

6.4 Additional penalties for non-compliance are available to CARB, such as decertification of offset providers, injunctive relief to stop emissive activities and court-assigned penalties.

Additional penalties are appropriate in certain circumstances for both allowances and offsets, and should be sought by CARB. For example, in the event that a source refuses to comply with CARB, CARB should be able to seek injunctive relief to stop emissions until it complies and an automatic penalty equal to an appropriate multiple of the cost of allowances should be applied. Additionally, in the case of fraud or bad faith, injunctive relief and large penalties should be sought. The federal Clean Air Act has criminal penalties for fraud and for knowing failure to comply, including both substantial fines and jail time (42 U.S.C.A. § 7413). Since lesser penalties are typically charged for refusal to comply than for bad-faith compliance, refusal to comply should be considered bad faith when appropriate and penalized accordingly.

7. Mandatory reporting requirements should be expanded to apply to more facilities, including those emitting between 10,000 and 25,000 metric tons per year.

EDF strongly supports CARB's proposal to reopen the Mandatory Reporting Rule to ensuring it complements the efforts under the cap-and-trade program. During the course of the cap-and-trade market design, it will become necessary to make changes, such as reporting dates to better track with allowance surrender dates. Further, requiring unverified reporting of facilities between 10,000 and 25,000 metric tons of carbon dioxide equivalents per year will be helpful to build capacity and understand the emissions footprint and potential control measures for these sources in the future.

Although EDF will participate in the rulemaking for revisions to the reporting rule and will deliver comments in that process, it is important that CARB understand at this time that we strongly support expanding the mandatory reporting tool to incorporate new sectors not previously included. Doing so will create consistency with the recently proposed federal reporting requirements and will improve the state's ability to incorporate sources in the cap-and-trade market. Specifically, EDF recommends CARB modify its current mandatory reporting rule to include:

- Upstream fuel producers
- Fugitive emissions of various sources
- Gas and oil exploration and production
- Local distribution companies (natural gas)
- CO2 suppliers
- Soda ash manufacturing
- Pulp and paper manufacturing facilities
- Nitric acid facility operators
- Calcining operations
- Magnesium production facilities
- Lime production facilities
- Iron and steel manufacturing facilities
- Glass production facilities
- Aluminum manufacturing facilities
- Various currently excluded refining operations and cogeneration facility operations
- Biomass delivered fuel combustion

8. Assorted market issues

8.1 More details are needed about making market transactions transparent.

CARB should provide more details about market transaction rules governing market activity. In general, the regulatory framework used for oversight must recognize that carbon markets contain attributes that make them unique from other types of markets. In particular, trading in a carbon market exists to further a public good (i.e., reducing emissions at the lowest possible cost). As such, trading practices should be allowed only to the extent that they help regulated entities lower their costs of compliance and only in a manner that furthers the public interest. This includes the safeguards enumerated in Subarticle 11, as well as ensuring sufficient transparency in the market to allow for price discovery and to build confidence in market operation.

To the extent allowed by federal law, ARB should seek to restrict trading of all allowances and allowance derivatives to registered exchanges and require that all trades be cleared by registered clearing organizations. Also, as Congress is actively considering legislation dealing with financial market regulatory issues in the coming months, CARB should work closely with Congress to make sure that either CARB retains the authority it needs to effectively regulate carbon markets or that the Congress creates a satisfactory federal regime that will protect California consumers..

8.2 PDR should provide more guidance to help avoid setting early phase caps too high so as to create a meaningful price signal.

The PDR should discuss provisions to avoid setting the cap too high in the early phases of the program.[43] Without such guidance, experience with other compliance cap-and-trade program suggests that there is a good chance that the cap will be set too high initially. CARB should be very conservative about setting the cap in the near term, thus putting the agency in a position to provide more allowances if needed. As discussed in the cap-and-trade schedule, auctions prior to the start of the program (on January 1, 2012), can provide early price discovery. Also, reporting requirements should give good sense of cap needs in early years without much need for *ex-post* updates, since such updates will undermine regulatory certainty and impede market actors efficient decision-making.

8.3 Adjust compliance instrument quota to account for voluntary renewable purchases.

If this means separating RECs and GHG reductions, EDF does not support using RECs to meet compliance obligations because there is no viable way to ensure that the projects have resulted in real emissions reductions from grid-based generation.

[43] PDR, Section 95910.

9. Appendix A: Stakeholder Comments Supporting Allowance Holding Account (Set Asides) for Local Government and Community Organizations, May 18, 2008 Docket, CARB

http://www.arb.ca.gov/cc/capandtrade/meetings/051809/scwa.pdf
Sonoma County Water Agency voices support for either reimbursement or set aside for local government-funded reductions:

> "Absent any allowance set aside or reimbursement, energy efficiency and renewable energy programs could provide a windfall of allowances to capped entities that would benefit from projects completed at public expense."

The alternatives suggested here have an added advantage over financial incentives or grants programs. Grants bring heavy overhead costs for the state and usually have considerable costs to applicants for writing the grant, contracting and financial auditing.

http://www.arb.ca.gov/cc/capandtrade/meetings/051809/may18pc_lgsec.pdf
Local Government Sustainability Coalition argues for local government set aside allowances:

> "The set-aside mechanism would mitigate the "double-counting" problem commonly associated with GHG reduction activities that impact the electric grid." Pg. 2.
>
> "Lastly, there will clearly be technical requirements associated with demonstrating that local government projects and programs produce high quality GHG reductions. CARB should not allow these potential challenges or methodological concerns to discount or eliminate the huge potential strategic benefit that can be realized from recognizing local government initiatives in the cap-and-trade program. Technical challenges have technical solutions. LGSEC will work with CARB and other stakeholders to develop methods to that show local government greenhouse gas reduction projects are real, additional, verifiable, and enforceable." Pg. 4.