



ENVIRONMENTAL DEFENSE FUND

finding the ways that work

May 18, 2009

Claudia Orlando
California Air Resources Board
1001 I Street
Sacramento, CA 95812
Via email at ccworkshops@arb.ca.gov

RE: EDF Comments on Allowance Set Asides for AB32 Cap and Trade Program

Dear Ms. Orlando,

Thank you for the opportunity to comment. Environmental Defense Fund (EDF), in partnership with San Francisco Community Power (SF Power), is exploring ways to aggregate emissions reductions achieved by small, dispersed sources for monetization within the AB32 cap and trade program. We're calling this exploration of community-scale aggregation and the associated piloting studies Climate for Community (C4C).

Under the C4C concept emission reductions by low-income households and small businesses – particularly those located in areas that have historically been subjected to high polluting air and greenhouse gas emissions – would be aggregated together to participate in available carbon markets. If adopted by policymakers, *community-aggregation would create a dynamic, ongoing incentive to reduce emissions in vulnerable communities, with concomitant economic and equity benefits.*

We must find a way to engage small commercial interests and residences in the fight against global warming because they are responsible for over one-fifth of California's emissions, not including their contribution to transportation sector emissions accounting for another 40%.

AB32 has several requirements for "Community Benefits and Protections" that affect implementation of any specific emission-reducing measure. First and foremost, a declining emissions cap sets a definitive limit on global warming pollution to ensure that the overall environmental outcome is achieved. Other requirements include:

- Must achieve same reductions as any other measure
- Cannot increase emissions of air toxics or criteria pollutants
- Cannot hinder ambient air quality standards efforts
- Must consider localized impacts
- Cannot have disproportionate impact on low-income communities
- Maximize environmental and economic benefits

Community benefits, and the need for an equitable, as well as efficient, allowance marketplace suggest several core features of an AB32 Cap and trade program:

- Open Markets
- Allowance value used to further the public good
- Incentives to seek out lowest cost reductions
- Transparent enforcement
- High-quality offsets
- Design for disadvantaged communities' benefit. We might call this an "equity gold standard", which borrows from the "gold standard" concept for offsets.

Benefits of creating financial incentives

Our impetus for exploring community-scale aggregation is the need to find ways to deliver benefits to communities via AB32. We can consider both sticks (direct regulations) and carrots (financial incentives). Thus far, public commentators have focused mostly on the sticks whereas the C4C concept uses the carrot approach.

Regulatory "sticks" are aimed at discouraging potentially harmful actions. For example, import tariffs protect domestic producers who may be subject to more stringent environmental protections than their foreign competitors. Further, operating permits obtained through the CEQA and NEPA processes make sure that environmental impacts are properly evaluated and mitigated.

Financial "carrots," on the other hand, encourage investments that achieve environmental benefits. Allowing community reductions to be aggregated into tradable credits provides a financial incentive for action. Bringing community players to the table also generates political support where economic benefits can be realized. Other carrots could be made available by designating auction revenue quantities to make investments that result in emission reductions, but this doesn't create the same dynamic mechanism to inspire action by residences and small commercial interests.

Incentives can be provided to various entities both large and small. Micro-financing loans made to individuals would encourage investment in energy efficient technologies with significant upfront costs. Large utilities and other regulated entities could also benefit from the creation of new programs designed to achieve additional low-cost emission reductions such as appliance replacement rebates. With the C4C concept, third party aggregators would have access to carbon market financing to fund emission reduction services, thereby delivering reductions in ways that lower the overall cost of meeting AB32 emissions cap goals.

Though AB 32 contemplates both sticks and carrots, financial incentives are likely to be more effective and efficient than direct regulations when it comes to driving innovation and engaging community stakeholders.

Aggregating community reductions for the carbon market

The C4C concept entails creating emissions reduction credits by aggregating reductions from household, small business and collective community actions. Those credits can then be made available to the allowance market, either through direct sale or some form of value swapped for other benefits. The overall goal is to bring environmental and economic benefits to low-income communities while achieving GHG and co-pollutant reductions.

Aggregation is already used at community-scale in several ways, including:

- Demand-response aggregation oriented towards small businesses
- “Just One Block” solar purchases geared towards households
- Micro-lending nested within community-settings

In the C4C piloting work, we're interested in reductions that achieve energy efficiency as well as conservation of other resources and minimizing transportation emissions. This includes increased waste diversion, water conservation, and more environmentally responsible consumer purchasing.

Certainly communities will come up with their own ideas as the concept takes hold and individuals begin to think creatively about achieving emission reductions. Therefore, a major benefit of the aggregation mechanism is that it creates a flexible structure that can be easily adapted to new reduction strategies and new methods of aggregation. Furthermore, aggregation will give control to communities to envision and enact measures that reduce GHG emissions and, in many cases, provide additional benefits that are both economic (e.g., lower household energy and waste management bills) and environmental (e.g., co-pollutant emissions reductions from vehicles).

Addressing methodological challenges via Technical Advisory Group

The aggregation concept and crediting mechanism are not without their challenges. For this reason, we have convened a Technical Advisory Group (TAG) to comment on and help refine our regulatory proposal, and to identify technical challenges and possible ways to overcome them. In particular, the TAG will contemplate several major issues:

- Double Counting and Cap Integrity
- Ownership of reduction credits
- Additionality of project reductions
- Measurement and Verification of emission reductions

The double counting issue, in particular, merits consideration of set aside allowances for community aggregated reductions. We are, however, exploring a Plan B. That is, we're open to the best available solution (or set of solutions) to address the equity requirements

of AB32 within the cap and trade program. We want to achieve outcomes but are not wedded to specific mechanisms for delivering community benefits. With that said, we believe that the C4C concept deserves serious consideration and that, thus far, all technical issues identified can be addressed. Using a set aside mechanism is a key to overcoming concerns about double counting and ownership of reductions.

Initial results from C4C piloting

To examine the feasibility of the Climate for Community concept and identify barriers to its success, EDF and SF Power implemented a pilot emission reduction project, focusing on roughly 2,500 low-income families and small businesses. Under the pilot, different interventions were applied to the households and businesses, ranging from brief or expansive surveys to identify emission-producing activity (e.g., vehicle use; electrical appliances; water and solid waste practices); the distribution of climate change kits – which included a Kill-a-Watt meter, power strip, sink aerators, among other items – to low-income homes; and the offer of assistance to small businesses to help them adopt emission-reducing measures (e.g., reductions in private vehicle use; lighting retrofits).

Here's a real story of success from our kit giveaway program:

"At one house (Mission District of San Francisco, African American family of five), the tenant said that her last PG&E bill, which was from the time period after our initial visit, decreased from \$150 to \$91. She has made the following adjustments:"

- She now turns off her power strip every night which has a TV and all sorts of electronics plugged into it and unplugs other devices nightly,
- She made her kids use the Kill-a-Watt meter to read the usage of everything they plug in,
- Uses the CFL (in addition to 3 others from PG&E) we gave her in the kitchen which is the most used area,
- Stopped buying throw-away, plastic water bottles in favor of using reusable stainless steel bottles (and she wants more for her kids)
- Hang-drying clothes
- Aerators in every faucet/shower
- Uses canvas bag when shopping

Piloting and Technical Advisory Group initial findings

Early pilot results and technical discussions with the C4C advisory group have identified the following:

- Small businesses and low-income families are (indirectly) responsible for a significant amount of polluting air and greenhouse emissions. Small commercial, residential and transportation emissions were responsible for over half of California's greenhouse gas emissions in 2007 when their transportation emissions are accounted for.

- Small businesses and low-income families tend to rely on older, less efficient appliances. Even when it's economically beneficial to replace this equipment, left undisturbed these populations tend to stick to status quo behaviors and continue to use old technologies. For example, roughly one-fifth of the refrigerators examined at low-income households as part of the pilot effort could be cost-effectively replaced with more efficient units, resulting in electric bill and polluting air and greenhouse gas emission savings. Likewise, more than 2,000 toilets were identified in the pilot that could be cost-effectively replaced with lower-flow models, resulting in direct water savings, and indirect energy and emission reductions.
- Low-income households exhibit a wide range of awareness about the economic and environmental impacts of household energy, water, and consumer goods consumption.
- If given the opportunity (e.g., access, support, funding, education) small businesses and low-income households exhibit a willingness – and even desire – to adopt measures that reduce their resource use, with concomitant reductions in costs and emissions. To adopt cost-effective behaviors and technologies, these populations need to overcome a number of barriers, including access to information (e.g., knowledge of available subsidies) and investment capital, prompting the need for third-party assistance.
- While monetizing carbon reduction value alone isn't sufficient to fund emission-reducing measures, this funding source can serve both as financing leverage and behavioral/institutional catalyst when linked with other funding sources.
- Geographic clustering of low-income populations with environmental hazards provides a focus point for emission-reducing efforts. Although the primary hazards (e.g., power plants; refineries) may be subjected to cap and trade rules, vulnerable populations that have been historically subjected to high emission levels may merit and be more accepting of focused community-based efforts to retire and/or replace inefficient appliances and vehicles.
- Allowing aggregation of emission reductions by many households and small businesses could help overcome emission trading transaction costs. Although it would be difficult for individuals to effectively participate in a cap and trade regime, third-party aggregation could catalyze community-based efforts, with carbon values in part funding third party intervention efforts. For example, aggregation of temporary electricity use reductions by small businesses under a California utility program has proven to be cost-effective.

Methodological findings

Bringing aggregated emission reductions into the carbon market will require careful consideration. Any methodology to do so should address the following:

- To operate effectively within a cap and trade structure, community-based emission reduction activities should be assigned value as part of a set aside of allowances from within the cap.
- Within a community carve-out, ownership of carbon reductions may be best deemed to a third party as a way of overcoming owner/renter challenges. In cases where appliance owners don't pay the concomitant energy costs (e.g., refrigerators; washing machines in rental units; lighting in businesses), the owners may have little incentive to replace inefficient appliances, even if it would be cost-effective to do so from a societal, and the renter's, perspective. As a result, renters pay higher energy costs than would be indicated under a purely engineering economics approach, with concomitant polluting air and greenhouse gas emissions. By assigning carbon reduction values to a third party that entity could flexibly focus the resulting benefits in ways that maximize property owner adoption of more efficient equipment. This could include initially focusing on equipment (e.g., coin-operated laundry facilities; toilets) in which split incentives don't exist. These same tenant/owner challenges pertain to increased recycling and composting, and to distributed power generation projects, such as rooftop photovoltaic systems.
- Dispersed reduction actions are measurable and verifiable. In the case of electricity or natural gas-related reductions this can be done through statistical analysis of meter data. The RGGI program allows for these actions to qualify as offsets, using performance standards to benchmark avoided emissions. More dispersed measures, related to a wider array of environmental media (e.g., solid waste; water) can be evaluated through statistically valid surveys.
- There are different measurement and verification risks associated with dedicated actions (e.g., refrigerator replacement) and portfolio approaches (e.g., providing a number of different measures associated with a variety of environmental media). Both sets of actions merit consideration.

Potential regulatory recommendations

Based on the findings above that resulted from early pilot work and consultation with technical experts, EDF recommends the following structure for a cap and trade program that provides maximum benefit to communities:

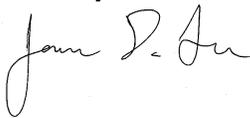
- The cap and trade framework should be crafted so as to allow for community-based aggregation of emissions achieved through sanctioned activities. Such an approach

would allow for dynamic, bottom-up emission reduction efforts that could compliment reductions delivered by industrial sectors and lower overall compliance costs.

- Valuation of community-based measures can be determined through a combination of market prices for carbon, consideration of equity benefits, and acknowledgement of the higher risks that full emission reductions may not be achieved. For example, market prices could be administratively adjusted upwards in cases in which emission reductions were achieved within a low-income community that had been historically subjected to environmental hazards. Likewise, these prices could be adjusted downward to account for uncertainties in emission reductions achieved associated with specific actions. All of these adjustments can be done through the allowance set aside mechanism.
- Third-party aggregators could be certified. Under the Climate for Community concept, any community-based group – Chambers of Commerce, Parent-Teacher Associations, and environmental groups – could be allowed to implement emission-reducing activities. However, to be eligible to claim the resulting values they would need to register with CARB, similar to existing demand-response programs implemented by California investor-owned utilities and, likely, akin to registration requirements for offsets providers and their third party verifiers.
- Emission reduction measures could be pre-certified. Similar to emission-reduction efforts for criteria pollutants (e.g., vehicle scrappage) and energy efficiency programs (e.g., Database for Energy Efficiency Resources), emission reduction activities implemented by third-party aggregators could be pre-certified, and/or subject to ex post verification.

Thank you for the opportunity to comment on AB 32 cap and trade design features, including a set aside approach that can incorporate the aggregation of community-scale emission reductions. EDF looks forward to continuing the discussion of these ideas with CARB as cap and trade design proceeds.

Sincerely,



James Fine, Ph.D.
Environmental Defense Fund