

**FRAMEWORK FOR PROTECTING COMMUNITY INTERESTS
WHEN DESIGNING MARKET-BASED MECHANISMS
FOR GREEN HOUSE GASES EMISSIONS REDUCTION**

Background

Many people suggest that a market-based compliance mechanism is a critical part for the overall Green House Gases (GHGs) emission reduction strategy. The Global Warming Solution Act [AB 32] authorizes the California Air Resources Board (ARB) to adopt market-based compliance mechanisms. The Market Advisory Committee (MAC) of national and international experts convened per the Executive Order made recommendations to ARB on the design of a market-based compliance program that permits trading with the European Union, the Regional Greenhouse Gas Initiative and other jurisdictions. The MAC recommended that a “Cap and Trade Program” be considered as the primary market mechanism and acknowledged that: a) “Carbon-tax” can also achieve similar results; and b) Environmental Justice concerns raised by many committee members and members of the public are true and need to be addressed in the design phase of a market based program.

AB32 also specifies that: a) the greenhouse gas emission reduction rules, regulations, programs, mechanisms, and incentives under its jurisdiction, where applicable and to the extent feasible, direct public and private investment toward the most disadvantaged communities in California and provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit from the statewide efforts;. b) the activities undertaken to comply with the regulations do not disproportionately impact low-income communities; and c) ARB when designing any market-based compliance mechanism and regulations consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution, as well as prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.

Community Concerns

On a global scale, the harmful effects of climate change include extreme heat, water shortages, flooding, more violent weather, and increased incidence and spread of disease. The higher incidence of mortality among elderly and lower income groups have been well documented during the heat episodes observed in Chicago and France in recent years. Similarly higher magnitude impacts are expected in lower income and minority groups as a result of more violent weather and biological effects as evidenced during recent hurricanes and some disease outbreaks in Europe. In addition, the lower income population is handicapped in: a) recovering from the aftermath of acute episodes because of lack of resources necessary to prepare themselves or their homes; and b) allocating necessary resources to prepare their homes and themselves to avoid acute impacts of climate change. Thus, the magnitude of climate change impacts (acute, chronic, direct and indirect) continues to be higher for low-income communities in all parts of the world.

At the community level, some argue that the Kyoto list of pollutants has no localized impacts and mobile source pollution (a major source of some Kyoto GHGs) primarily affects regional air quality. It is implicit in this argument (not supported by scientific findings or consensus) that

reduction of GHG emissions from a source (via technology changes or activity modifications) will not simultaneously influence the emission rates or quantity of criteria pollutants or toxics. In contrast, most people agree that approaches and technologies currently available and those under consideration for reducing GHGs will also simultaneously reduce other pollutant emissions, thus providing co-benefits to nearby communities and the region.

In addition, some believe that mitigation of criteria pollutants that are also short-lived and non-Kyoto GHGs (such as light absorbing particles) is the best near-term approach for mitigating global warming since the climate will respond to their reductions on a much shorter time scale than to CO₂. Including non-Kyoto GHGs into the equation for designing climate protection strategies is likely to create different outcomes than considering the six legacy GHGs alone.

Hence, irrespective of the approaches taken to reduce GHGs, the common concern is that a source participating in an emission trading scheme or any kind of an offset-based program would continue its emissions at current levels. Thus, a community near such a source would continue to bear a higher burden of pollution exposure and would not receive associated co-benefits when compared to another community near a source that does not participate in an emissions trading scheme, but chooses to reduce emissions by different technological approaches. Even with a Carbon-tax scenario a similar outcome is to be expected from sources that are willing to pay a higher amount of Carbon-tax and may pass on the added cost to the consumers.

In addition, one must recognize that the pollution impacts from freeways, rail yards, and distribution centers are very much similar to a continuously emitting stationary source like a power plant or a refinery especially to a community living nearby. Hence, allowing a freeway or rail yard expansion with offsets from a different area is not much different from allowing a power plant to be built with offsets, because to the people living nearby, there is no relief either in terms of the cumulative exposure burden or risk.

Hence, it is incumbent on any GHG emissions reduction program to ensure that the communities continuing to bear the higher pollution burden will participate in and benefit from these GHG reduction efforts, specifically when market-based compliance mechanisms are designed and implemented. In order to protect the interests of these communities, one needs to quantify the potential for direct, indirect, and cumulative near-source emission impacts. It is also critical to determine what co-benefits market-based mechanisms will or will not bring about as specified in the law. There are methodological limitations and large uncertainties associated with such an exercise. For example, localized or community level exposures or risks cannot be estimated accurately because of wide variation in the emission inventory and limitations in modeling capabilities. Current risk assessment methodologies are not fully geared to assess cumulative risks of cancer and non-cancer effects as well as combined effects of criteria and toxic pollutants. In addition, the current health effects data are not robust enough to quantify the impacts at a community level, which greatly hampers the intent of the language in AB32 to protect against any potential increase in community level exposures or impacts.

Potential Solutions

Therefore, an adequate mitigation mechanism must be included in all market based programs because: a) these communities will continue to experience a higher burden of exposure and risk;

and may not receive any co-benefits associated with GHGs emissions reduction; b) they do not have a voice in the decision making process including the design of market based mechanisms; c) the technical capability to characterize the near source cumulative exposures and risks are far from being satisfactory, and d) the industry-specific correlation between GHG abatement and its effects on criteria pollutant and toxic emissions is neither well understood nor can be quantified at a community level.

Hence, it is critical to set up a framework so that these communities will become a partner and receive due benefits in all market-based mechanism for reducing GHGs. The methodology to arrive at the fair and plausible share of benefits needs to be debated and ironed out further.

One option for generating funds to offset community impacts is to allocate a percentage of the sale of allowances that will get auctioned and provide a funding stream to be earmarked for community benefits. The allocation responsibility should be established upstream and upfront before the auction of allowances, hence generating a funding stream for community improvements early in the process. The percentage could be set to reflect the level of uncertainty associated with determining disproportionate community exposure and impacts. For example, if the uncertainty associated with the incremental exposure due to GHG emission mitigation is 20 % at the local or community level, the compensation can be 20 % of the total value of any trade conducted by the sources in that area. One could also consider the range of uncertainties under different scenarios and arrive at an agreeable percentage that needs to be contributed by all transactions towards community level benefits.

To add rigor to the control of community impacts, a facility that meets its commitments with offsets rather than actual technology enabled reductions would be expected to contribute more than a facility that meets its commitment with actual reductions and has allowances for sale on the market. In addition, creating such an upstream funding process based on allowances ensures that all sources can participate equally. Adding the option to prorate an additional contribution for those who do not make their commitments adds stringency and seriousness to the program.

The upfront approach to addressing potential impacts is preferred because it should avoid many complexities associated with downstream options associated with tracking trade volumes. However if the downstream option is used a fee could be charged on every purchase of emission credits.

In order to insure that cumulative emissions and its impacts are also considered in the Market Mechanisms as required by the law, the Cumulative Impacts Screening methodology currently being developed in a research project sponsored by ARB should be finalized and approved by the ARB as a common screening tool. This Cumulative Impacts Screening Tool can be used to identify communities or geographical areas that already have higher pollution.

One approach to protect these highly impacted communities would be to preclude all sources in these areas from participating in any market based or offset based trading programs. Another approach, should these pollution sources be interested and be allowed to participate, would be to require that they meet additional criteria such as: a) contribute twice the amount towards community benefits fund; b) work with the community or communities potentially affected, city and local air district to develop a community benefits agreement that can be implemented and

enforced utilizing the contributed funds. Alternatively, one could consider incentivizing these sources to reduce emissions by offering extra credits equivalent to the amount they would have contributed as their share to participate in the market mechanism.

The community benefits fund created by a market mechanism must not to be viewed as cash vouchers for individuals in a specified geographic area, but as a resource for the community to decide and spend on alternative measures within the area to reduce exposures or risks from other sources, utilize the resources to fund community level programs focused on improving energy efficiency at homes, schools, etc or even consider other options such as relocation of emission sources or receptors to reduce the overall pollution burden in these communities.

By incorporating these concepts into the scoping plan and the implementation of the California Global Warming Solutions Act [AB32], California will be: a) treating communities as partners in the market-based approach since it is their cumulative and incremental exposure burden and risk that we are unable to quantify and are willing to trade as a society; b) accepting our responsibility to minimize the impacts at a community level; and c) following the requirements as well as the intent of the law.