EcoSecurities Limited

Harvard Square
206 W. Bonita Avenue
Claremont, CA 91711
USA

Tel +1 909 621 1358
Fax +1 909 621 7438
Email us@ecosecurities.com
www.ecosecurities.com

Chairwoman Mary Nichols
California Air Resources Board
Headquarters Building
1001 "I" Street
P.O. Box 2815
Sacramento, CA 95812
FAX: (916) 445-5025

August 5, 2008

Re: EcoSecurities Comments on the AB 32 Scoping Plan

Dear Chairwoman Nichols and esteemed members of the ARB Staff:

On behalf of EcoSecurities, a leader in the development of greenhouse gas (GHG) emission reduction projects, thank you for the opportunity to comment on the draft Scoping Plan for AB 32. We acknowledge that designing the Scoping Plan has and will continue to be a significant task, and we applaud you for your diligent work and transparent processes to date. We hope our efforts will contribute to the development of climate policies in California that are environmentally effective and administratively straightforward. We would also encourage you to consider comments being submitted by both the Business Council for Sustainable Energy (BCSE) and the International Emissions Trading Association (IETA) on our behalf as members of those organizations.

In summary, we would like to express the following five (5) points:

1. We are glad to see that a cap-and-trade system will be a component of California's approach to implementing AB 32, but believe that it should be the core component rather than a backstop to regulatory and other non-market mechanisms because it can achieve reductions at least cost.
    - Presented with the opportunity to achieve reductions at least cost, choosing not to do so is irresponsible to both consumers and our larger obligation to responsibly utilize all possible resources to halt and reverse climate change
2. We were pleased to see the ARB acknowledge many of the benefits of an offsets program, but believe the Plan's treatment of offsets does not do justice to the amount of consideration the issue has been given by stakeholders to date. We would encourage ARB to provide greater clarity on approved project types, protocols, processes for amending/introducing new project types, crediting period, start date, validation and verification processes, etc., as well as any limitations that may be applied, as soon as possible.
    - This clarity would allow project developers to begin investing in reductions today that will jumpstart California's AB 32 goals and ensure offset availability in the market's early years
    - Creating a clear process for how ARB would approve new project types could create an opportunity to leverage private carbon finance into improvements in the EJ community
    - Establishing a panel of practitioners and experts on offsets may be necessary to help guide

- this decision-making process; and such panel should be conducted in a transparent fashion and should be coordinated with efforts at the regional WCI level

3. ARB should give greater consideration to the potential unintended consequences of interactions between the carbon fee, regulatory measures, and cap-and-trade system that California is proposing, specifically focusing on the implications for offsets.
    - Looking at RGGI as an example, it is clear that an overly complex system which introduces market distortions will impact demand and price signals for offset developers, and may create disincentives for investing in offset projects in those uncertain systems
    - Interactions between markets, regulations, and other programs may make each less effective
4. We were disappointed to see such a stringent quantitative limit on offsets, and would encourage ARB to consider the potential implications of limits, especially interactions between multiple limits.
    - Arbitrary quantitative limits reduce the size of the offsets pool, doing nothing to change the proportion of low-quality credits that get through, and possibly having a negative impact on offset quality if higher quality offsets cannot compete for the limited pool of availability with lower quality offsets that can potentially be made more cheaply and easily
    - Interactions of offset limits may mean that if a 10% limit is imposed, additional geographical and project type limits will make offsets more expensive and will undermine their ability to contain costs and achieve broader emission reductions from off-system sources
    - If offsets can also be used to reduce carbon fee and regulatory burdens, a percentage limit (e.g. 10%) on the cap-and-trade component of the total emissions budget only would actually result in a much smaller pool of offsets available to meet overall compliance obligations, and thus any quantitative limit should be applied to the state's total emissions
5. We would encourage ARB to explicitly outline a program whose borders reflect the international nature of the climate change issue; to that end we would encourage ARB to acknowledge the CDM and other international sources of credits in the final draft.
    - International offsets will be crucial for cost containment in California
    - Quality of international offsets can be ensured by, e.g. MOUs, and excluding credits from project types that California does not support (e.g. large-scale hydro, as the EU ETS has done)
    - International offset fungibility promotes international cooperation, liquidity in the early years before a California offset pipeline is significant enough, and the development of a global carbon market
    - Expanding demand for CERS creates demand and opportunities for CA technological deployment overseas
    - Allowing international offsets acknowledges "reverse leakage" or "emissions outsourcing," since many goods consumed by Californians are manufactured in developing nations
    - We acknowledge concerns about CDM from an environmental integrity and retention of co-benefits perspective but believe our comments address these issues sufficiently
6. We support the concept of a Carbon Trust but believe that it must be developed as a complement, not competitor, to private offset project investment.
7. We would ask for clarification on the treatment of voluntary offsets, and on ARB's Voluntary Early Action Policy Statement. Although not part of the Scoping Plan Draft, we believe the ARB could use the final Scoping Plan to clarify how Executive Orders "approving" individual voluntary early activities can be obtained in a transparent manner that fosters high quality offsets and stakeholder buy-in.

In addition to these points, below we have reiterated some of the detailed comments on offsets which we have provided in the past. We hope that these comments will be reconsidered to enable greater clarity and specificity in subsequent drafts of the Scoping Plan.

The Benefits of Offsets

The use of offsets from a broad range of activities, project types, and geographies for compliance purposes is an important component of a compliance GHG reduction system. As the draft scoping plan notes, a robust offset policy can provide a number of core benefits. According to the International Emissions Trading Association (IETA), of which EcoSecurities is a member, these include[1]:

Reducing compliance costs of achieving an emissions reduction goal

1. Generating broader emission reductions than would otherwise occur in capped sectors alone, thereby "extending the reach" of the cap to additional sectors and reduction opportunities;
2. Providing for immediate and near-term reductions of GHG emissions and possibly accelerating the rate of GHG reductions by targeting least cost options first;
3. Providing the provisional buffering necessary to continue absolute reductions while the economy and energy systems transition to "greener" technology;
4. Enabling stringent long-term reductions required to stabilize atmospheric concentrations of GHGs;
5. In some instances, providing co-benefits of offset projects, including habitat protection, improvements to local air quality, job creation, etc.[2];

Maintaining competitiveness in the global marketplace

6. Encouraging emission reductions where they are most cost effective, thus reducing the societal cost of achieving real reductions and avoiding the diversion of resources from other important activities;
7. Saving money for businesses and consumers[3] and minimizing regressive impacts[4];
8. Reducing in-state job loss and emission "leakage" elsewhere if high compliance costs cause production to shift to other states or countries;
9. Preventing the premature retirement of capital assets while technologies are being developed that are required to achieve long-term climate protection objectives;

Promoting innovation and broad participation in the carbon market

10. Stimulating innovation outside the cap in uncovered or unidentified sectors, and in capped sectors by giving companies both a way to avoid locking in suboptimal technologies and time to pursue R&D;
11. Allowing all sectors of the economy, e.g. foresters, farmers, etc. the opportunity to earn revenue for emission reductions they achieve, and promote a globally uniform carbon price;
12. Creating an effective method of linking to other GHG regulatory jurisdictions through a common commodity, if California allows internationally recognized offsets[5]. This will help broaden the international effort necessary to achieve long term global targets and create economic opportunities for California in the global search for low cost reductions.

---

[1] The full document containing these and other important points on offsets (in a federal context) is available at: http://www.ieta.org/ieta/www/pages/getfile.php?docID=2968

[2] For example, anaerobic digesters at farms that capture biogas and generate electricity can reduce ammonia, a precursor of fine particulate matter (PM2.5), which has been cited by Resources for the Future as "arguably the number-one environment-related public health threat facing the nation." Shih et al, "Ammonia and Methane from Livestock Operations: Valuation and Policy Options." RFF DP 06-11, March, 2006.

[3] New Carbon Finance, North America White Paper - February 2008. The report shows that allowing 15% international offsets would save each person in the US $480.

[4] According to the Center on Budget and Policy Priorities, "Unless Congress includes adequate measures in climate-change legislation to shield low-income families, even a relatively modest climate-change policy (one aimed at reducing greenhouse-gas emissions by 15 percent) would impose an estimated $750-$950 a year in added costs, on average, for a family in the bottom 20 percent of the income spectrum. These households have average incomes modestly over $13,000." See http://www.cbpp.org/pubs/climate-brochure.htm for the full report.

[5] Jaffe, J. and R. Stavins (2007). "Linking Tradable Permit Systems for Greenhouse Gas Emissions: Opportunities, Implications, and Challenges."

Offsets offer a cost-effective, immediate mechanism to reduce greenhouse gas concentrations, and it is important to dispel the misconception that offsets allow some polluters to just "keep polluting" over the long-term. By putting a price on carbon, a well-designed offsets program creates strong financial incentives for emitters to *reduce* their emissions. Offsets merely facilitate quick reductions where they are most cost effective, cushioning the economy and environment as new technologies are deployed.

Many other stakeholders to the Scoping Plan process have reiterated some or all of these benefits as well in previous comments. For more information on the benefits of offsets, we would refer CARB to the Offset Quality Initiative's recent white paper[6], the Business Council for Sustainable Energy's (BCSE) position paper on offsets[7], Chapter 15 of Resources for the Future's paper on Assessing U.S. Climate Policy Options[8], as well as the April 2008 Harvard-Duke offsets conference backgrounder entitled "Opportunities and Challenges for State Carbon Trading Schemes."[9]

Existing Offset Project Types

Allowing offsets from a broad list of projects promotes the broadest possible reductions. Approved project types could include, but should not be limited to, project types that have been developed under the Clean Development Mechanism (CDM), the California Climate Action Registry (CCAR), the Voluntary Carbon Standard (VCS), and others. We were disappointed to see no specification of project types in the Scoping Plan, and only three possible project types outlined in the Western Climate Initiative (WCI) draft plan. This recommendation is consistent with the comments of many stakeholders the Scoping Plan public participation process.

Examples of approved methodologies under the CDM which California and/or the WCI could draw from include (but are not limited to):

- Improvements in water pumping efficiency
- Reductions from waste heat recovery and utilization for power generation at cement plants
- Bus rapid transit
- SF-6 emission reductions in electrical grids
- Fuel switch from fossil fuels to biomass residues in boilers for heat generation
- Grid-connected electricity generation using biomass from newly dedicated biomass plantations
- Distribution of efficient light bulbs to households
- Secondary N_2O destruction in nitric acid plants
- Displacement of fossil fuels by using grid-connected energy from renewable sources
- Conversion from single cycle to combined cycle power generation
- Coal bed methane, coal mine methane and ventilation air methane capture and use for power and heat and/or destruction
- Fuel switching in industrial plants from coal or petroleum fuels to natural gas
- GHG reductions from manure management systems
- GHG reductions from treatment of industrial wastewater
- Incineration of HFC-23 waste streams
- Restoration of degraded lands through afforestation/reforestation

---

[6] http://www.offsetqualityinitiative.org/documents/WhitePaper.pdf
[7] http://www.bcse.org/files/BCSE%20Offset%20Principles%20Final.doc_0.pdf?phpMyAdmin=c3410f726d1c4bc885e0c67b3e06c97f
[8] http://www.rff.org/Publications/Pages/CPF_AssessingUSClimatePolicyOptions_IB15.aspx
[9] http://www.law.harvard.edu/programs/elp/Offsets%20Background%20Paper%201%20Final.pdf

- Afforestation and reforestation of degraded lands for sustainable wood production

According to *State and Trends of the Carbon Market 2008*, the CDM currently has 3,188 projects in the pipeline. Carbon contracts for clean energy projects (renewable energy and energy efficiency) accounted for nearly two-thirds of the transacted volume in the project-based market in 2007, reflecting the CDM's mission of supporting emission reductions and sustainable development. These projects typically use sound, road-tested technology, are operated by utilities or experienced operators and have predictable performance, resulting in CER issuances that are expected to yield 70-90% of expected PDD volumes. This explains why they are being targeted by buyers, now that the known industrial gas project types (e.g. HFC-23) have contracted.

The Regional Greenhouse Gas Initiative (RGGI) has approved the following project types:
- Landfill methane capture and destruction
- Reduction in emissions of SF6
- Sequestration of carbon due to afforestation
- Reduction or avoidance of CO_2 emissions from natural gas, oil or propane end-use combustion due improved efficiency
- Avoided methane emissions from agricultural manure management operations

In addition, some RGGI states have considered including the following project types in the near future:

- Urban tree canopy restoration
- Salt marsh restoration
- Perennial vegetation restoration

The California Climate Action Registry (CCAR) has approved the following protocols:
- Livestock Project Reporting Protocol
- Forest Project Protocol
- Landfill Project Reporting Protocol

At the very *least,* all the aforementioned project types, as well as those currently under development by the California Climate Action Registry (CCAR), and those not mentioned but with existing approved methodologies, should be permitted for use in a future California cap-and-trade program. Finally, if the natural gas sector is not initially included in the cap-and-trade system, there is no reason why reductions they achieve should not be eligible for offsets.

Modifying Existing Project Types and Introducing New Project Types

In addition, a mechanism should be developed whereby project developers can submit modifications and revisions to existing project types, as well as *new* project types for consideration and approval. Such mechanisms ensure that good projects that may not meet the exact cookie-cutter requirements of a particular protocol have enough flexibility to enable consideration and approval. Furthermore, establishing processes for introducing new project types encourages ongoing innovation in the search for new emission reductions. In the CDM, this process and has helped launch over 100 methodologies for

new project types. We would also refer staff to the VCS procedure for introducing new project types, which involves review and approval by two separate independent third party verifiers.[10]

Offset project developers have the opportunity to leverage significant amounts of private capital into projects that reduce, sequester and/or destroy greenhouse gas emissions; some of these projects can potentially be developed in and around communities with environmental justice (EJ) concerns. While we do not believe that it is possible or reasonable for *all* project types to directly benefit environmental justice communities, we do believe that opportunities exist to do so, and these should be encouraged to the extent possible. EcoSecurities would be happy to work with CARB and representatives of the EJ community to identify these opportunities. In the meantime, we would suggest the following mechanisms for encouraging carbon finance investments in EJ projects:

1) Identifying a list of project types that would promote EJ benefits (e.g., insulation of low-income housing),
2) Providing a streamlined approval process for these projects,
3) Making such projects free or less expensive to register (which would provide significant cost savings for the project developer),
4) Creating a "gold standard" seal of approval from the region for such credits that could garner a premium on the voluntary market
5) Creating grant funding opportunities from state and/or regional entities to be used at offset projects in the region, so long as these opportunities do not undermine project additionality
6) Investment of a portion of project fees into the development training programs for green collar jobs in offset project implementation and verification for disadvantaged communities

Offsets and RECs

Renewable Energy Certificates (RECs) should not be permitted for use as offsets**.** In order to support the claim that RECs and offsets are equivalent, evidence would have to show clearly that a REC represents the same environmental benefits as a carbon offset. However, there is not even a universal definition of a REC and its associated environmental attributes from which to begin. From state to state, RECs range widely in their standards and in the inclusivity of their definition, from a simple representation of renewable energy generation on one end, to the inclusion of all associated environmental attributes including GHG, criteria, and toxic pollutant reductions at the other.[11] Proving that RECs and offsets are equivalent is therefore very difficult given the diversity of REC definitions. Michael Gillenwater of Princeton has made this point as well, noting that voluntary and compliance markets define RECs "vaguely and inconsistently and so cannot function as a single environmental commodity."[12]

In addition, carbon offsets are subject to a process that involves estimating the emissions baseline (what would have happened in the absence of the project) and calculating the difference in emissions between the "no-project" scenario and one that takes the offset project into account. This process is critical to proving the additionality of an offset project. RECs face no such requirement and thus cannot be considered environmentally equivalent to offsets. Also, Gillenwater has noted that "it should not be

[10] See http://www.v-c-s.org/docs/VCS%202007.pdf page 16.
[11] Gillenwater, Michael. Redefining RECs (Part 1): Untangling Attributes and Offsets. Princeton, NJ: Princeton University Science, Technology, and Environmental Policy Program, 2007; Appendix A, pgs 1-3.
[12] Gillenwater, M. (2007) "Redefining RECs (Part 1): Untangling attributes and offsets," Discussion Paper, Version 2. Science, Technology and Environmental Policy Program, Woodrow Wilson School of Public and International Affairs, Princeton University.

taken as a given that voluntarily buying…RECs will increase the amount of renewable electricity generated or decrease the amount of non-renewable energy generated…. In a system that ignores additionality, [Business As Usual] projects will dominate the market."[13] Finally, as recently noted by the American College and University Presidents Climate Commitment, "without clearly proven additionality and ownership of the renewable energy credit, RECs cannot be definitively counted as legitimate carbon offsets."[14]

Geographic Limits on Offsets

Offsets should not be limited or preferences because of their geographic origin. As noted by the Offset Quality Initiative's (OQI) recent paper on offsets, "Regulatory offset programs should not restrict offset eligibility by geographic source. Because GHGs accumulate both uniformly and globally in the atmosphere, the location of an emission reduction is immaterial to its climate change impacts. To capture the most cost-effective emission-reduction opportunities first, regulations should not place limits on the location of offset projects based solely on geography."[15] In other words, limiting offsets geographically undermines the very scientific and market principles that make offsets effective. As such, imposing unnecessary geographic limits only increases the cost – often substantially – of achieving an emissions reduction goal.

Moreover, as more and more sectors of the economy are capped, there will be a declining number of eligible sources of offsets over time from within the state. Thus, if offsets are required to originate in California, fewer and fewer credits will be available over time and their economic benefit will be severely hampered. When combined with the fact that California has already "picked" many of the "low-hanging fruit" in terms of emission reductions through direct and/or indirect regulation, California-only offsets are likely to be very expensive and lead to an implementation strategy for AB 32 that costs considerably more than it might otherwise. Many of the regulatory programs suggested in the Scoping Plan will only further reduce the availability of these low hanging fruit, making in-state reductions very expensive and undermining the ability of offsets to provide cost containment.

Recent EPA analysis attests to the cost reduction benefits of eschewing geographic limits in favor of allowing international offsets: The Agency estimates that the costs of complying with the Lieberman-Warner bill would be reduced by a staggering 85% with unlimited access to offsets compared to a scenario in which no international offsets were allowed.[16] In turn, this would make leakage of emissions out of California much more likely.

California could also easily guarantee that offsets from outside its borders meet the state's rigorous additionality requirements simply by linking only with other cap-and-trade systems whose offsets and crediting systems meet the state's requirements, and/or by requiring MOUs with other programs whose credits will be allowed.

Eschewing geographic limits is also consistent with the final report of the Market Advisory Committee, the group of international experts formed to advise the ARB on the development of a GHG reduction

---

[13] Ibid.
[14] Available at http://www.presidentsclimatecommitment.org/offsetprotocol.php
[15] http://www.offsetqualityinitiative.org/documents/WhitePaper.pdf
[16] "EPA Analysis of the Lieberman-Warner Climate Security Act of 2008, S.2191 in 110th Congress," See http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf

plan. The Committee's recommendations stated that "most Committee members feel that there should be no geographic restrictions— that a standards-based approach with considerations for risks… puts sufficient limits on offsets." Allowing offsets from outside the state, they note, "will ensure that global emission reductions are obtained at the lowest possible cost and may also encourage other states to follow California's lead on climate change." [8]

Linking and the Use of CDM/JI Offset Credits in California

We were pleased to see that the Scoping Plan acknowledged the important opportunities to achieve emission reductions internationally (Page 44), and hope the final Plan will explicitly acknowledge the role that Certified Emission Reductions (CERs) generated under the Clean Development Mechanism (CDM) could play in California. Existing market mechanisms (e.g. CDM) are built on sound scientific and economic principles and have now undergone 10+ years of policy, infrastructure, and institutional development. The creation of these credits is tightly regulated by the United Nations and is acknowledged as generating some of the highest quality offsets currently available to the market.[17]

Including internationally sourced offsets in a future cap-and-trade system acknowledges that climate change is a global issue, and positions the state to engage as a global leader on the issue of climate change. It promotes goodwill with countries already actively reducing their carbon footprints and can help provide a bridge to a future international climate agreement. As noted by UNFCCC Secretary Yvo de Boer at the recent Bali Roadmap meeting in Bangkok: "a functioning carbon market will be critical to a successful [post-2012 climate change] agreement."

Explicitly allowing use of CERs and offsets from other systems into California would help contain exposure of consumers to possible carbon price spikes and boost the ability of developing countries to adopt domestic emissions management systems. Recent research at the federal level indicates that international offsets will be essential to managing the compliance costs associated with implementing a U.S. cap-and-trade program. A recent analysis by the EPA notes that, "If international credits are not allowed (or are more expensive than U.S. GHG allowances), and domestic offsets are still limited to 15%, then allowance prices increase by 34% compared to the bill as written."[18] In contrast, allowing CER use would decrease costs 34% while allowing their unlimited use would further decrease costs 26%. Another recent study by New Carbon Finance (NCF) indicates that under Lieberman-Warner, a carbon price of $40-$50 is likely by 2020. The NCF report concludes that allowing 15% international offsets could save the US economy up to $145 billion (or $480 per person) annually.

Allowing for use of international offsets also provides an effective way of making cost-containment opportunities available immediately at the onset of the cap. There is an existing pipeline of CERs available that have already been verified by an independent third party and certified by the UN, and allowing their use in a California system would provide needed liquidity in the early years before capped entities can make the large infrastructural shifts necessary to achieve their caps, and before a California offset pipeline is significant enough to provide the cost containment that will be necessary to ease the transition to a low-carbon economy.

[17] See the Environmental Data Services report, "The ENDS Guide to Carbon Offsets 2008."
[18] US ENVIRONMENTAL PROTECTION AGENCY, EPA Analysis of the Liebermann-Warner Climate Security Act of 2008, S. 2191 in 110th Congress, March 2008.

International project-based credits, or CERs, can also provide export and relationship-building opportunities for the California's growing businesses in clean technologies, finance and management. A recent UN report[19] shows that 14% of technology and 10% of knowledge transferred through the CDM is currently U.S.-based; this could grow significantly with direct U.S. engagement in the market.

In addition, allowing international offsets for use in California acknowledges that we as Californians are indirectly responsible for emissions that occur outside our borders, specifically those resulting from the manufacturing of goods in developing countries that are destined for our state. This can be thought of as "reverse leakage." In other words, Californians spend millions of dollars each year on goods whose production (and therefore, emissions) has been outsourced developing countries like China and India. According to a recent E&E News piece (8-4-08), "a pending U.S. EPA study estimates that half of U.S. global warming emissions are related to material and food consumption." Specifically with respect to California, the state's Chamber of Commerce notes that "California is among the 10 largest economies in the world with a gross state product of more than $1.5 trillion. International-related commerce accounts for approximately one-quarter of the state's economy. Although trade is a nationally determined policy issue, its impact on California is immense."[20] Clearly, the related impact that the production of imported goods has on our state's indirect emissions and our carbon "shadow" is great. Therefore, allowing offsets from CDM countries, where California's manufactured goods originate, is one way to appropriately assume responsibility for those emissions.

The Market Advisory Committee has also expressed support for linking California's emissions trading program with other existing systems, thereby increasing the potential for economic gains from trade and associated cost-savings. Moreover, the MAC rightly notes that, in addition to bringing "lower costs and significantly greater emissions reductions," successfully linking to other emissions trading efforts will "increase the likelihood that a national system with appropriate linkages to state efforts might be adopted."[21]

HFC-23

Some stakeholders have voiced concerns about the possibility of credits from certain project types that they feel are of questionable quality or which have created perverse incentives, e.g. HFC-23 destruction, entering the California market. Many of these concerns are already being addressed through a variety of reforms underway by the Executive Board to the CDM, as noted in a recent report issued by the Nicholas Institute at Duke University.[22] EcoSecurities' "perspective" addendum to the Nicholas Institute paper notes that "no new HFC projects have been registered since October 2007," as the CDM Executive Board has essentially announced that they will no longer be approving new HFC-23 projects.

In addition, projects now in the pipeline such as renewable energy, methane reduction from cement and coal beds, energy efficiency (EE) and fuel switching are expected to grow in importance as industrial gas projects plateau. Although HFC-23 projects are often raised as an example of the "failure" of CDM because of its focus on a small pool of high GWP gases, it is important to note that, based on the number of projects that have been developed, HFC projects represent only a tiny percent of the total number of

[19] Seres, Stephen. "Analysis of Technology Transfer in CDM Projects." December 2007.
[20] http://www.calchamber.com/GovernmentRelations/BusinessIssues/Pages/InternationalTrade.aspx
[21] See p 69 of "Recommendations of the Market Advisory Committee to the California Air Resources Board" June 30, 2007. Available at http://climatechange.ca.gov/publications/market_advisory_committee/2007-06-29_MAC_FINAL_REPORT.PDF.
[22] Available at: http://www.nicholas.duke.edu/institute/offsetspolicy.pdf

projects approved under the CDM (Figure 1). Looking at the projects from this perspective, the CDM has been dominated far more by renewable energy and EE projects than any other project types.[23]

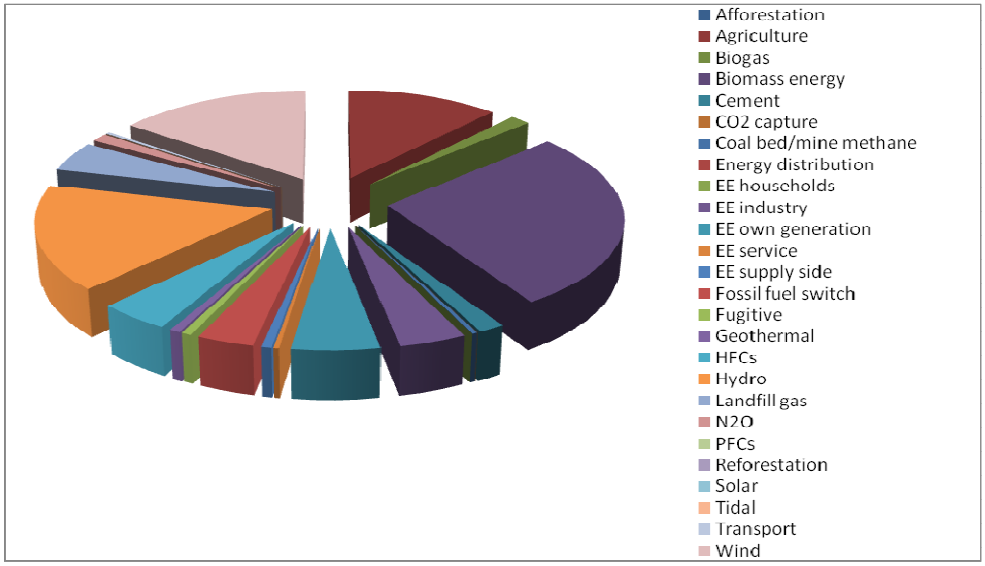


Figure 1. Number of Projects Successfully Registered Through the CDM by Sector through the end of 2007. Based on data from the UNEP Risoe CDM/JI Pipeline Analysis and Database, April 1st 2008.

If these reforms do not adequately address California's potential concerns with respect to the CDM, the appropriate response would be selectively prohibiting credits from specific kinds of projects from California, not prohibiting all credits from the CDM across the board. The European Union has already set a precedent for this by excluding credits from nuclear, large-scale hydroelectric, and LULUCF projects from entering the EU ETS as per the 2004 EU Linking Directive.[24] As a result, there has essentially been a moratorium on projects of these types under the CDM, demonstrating how project-type preferences exerted by a cap-and-trade program can send strong signals to project developers. California could easily do the same if the state were to allow CDM credits with some caveats by project type. Because each CER has a unique serial number identifying its geographic origin and project type, achieving this sort of project preference would pose no great challenge to the state.

Quality Concerns in the CDM

Some stakeholders have expressed concerns about the quality of CERs approved in the CDM. The early years of the CDM, during which practitioners were essentially "learning by doing" as they pioneered new markets, are not indicative of current or future market performance. New cap-and-trade systems will no doubt benefit from the experience of the CDM and be all the better equipped to work towards emissions reductions goals.

Through rigorous verification procedures, Californians can be assured that offsets meet the state's rigorous standards. EcoSecurities, which has long been a vocal proponent of CDM reform in the international policy realm, advocates a "fix it, don't ditch it" philosophy. Numerous articles and academic papers which have been critical of the CDM also support this pragmatic approach.

[23] Olander, Lydia et al. "Designing Offsets Policy for the US." May 2008. Nicholas Institute, Duke University. Pg. 107.
[24] For the Linking Directive's full text, see: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:338:0018:0023:EN:PDF

We propose that many of the reforms we have suggested at the international level to reform the CDM are taken as "lessons learned" for the California system. These include, for example:

- Increased use of benchmarking and decision precedence to standardize environmental benefits and decrease subjectivity;
- Shifting the responsibility for payment of third-party verifiers from the project proponent to the EB (or in California's case, ARB), including change in fee structure;
- Quarterly platforms for experience-sharing between third party verifiers and the oversight body to improve consistency and verifier performance;
- Ongoing independent audit of third party verifier decisions whereby inconsistency with precedent/standards would have consequences for accreditation; and
- Investment of a portion of project fees in developing university programs to train new verifiers

Many of the aforementioned recommendations have also been supported by "critiques" of the CDM. Most notably, the Nov 2007 WWF/Öko Institute paper by Lambrecht Schneider, which many have cited as the primary evidence that the CDM lacks environmental integrity, actually recommends many of the same reforms supported by EcoSecurities. Moreover, the WWF report *also* concludes that over 80% of CERs represent environmentally additional GHG reductions and that "It is likely that the *recent* share of projects where additionality is unlikely or questionable is lower while it may have been higher at the very beginning of the registration process."[25]

Another critique often cited as an indictment of the CDM is a recent paper by David Victor and Michael Wara of Stanford University. While the authors are admittedly critical of the CDM, they also note that "experience with the CDM suggests that international carbon offsets will have an important role to play in engaging developing nations in the project of climate change."[26] Victor and Wara also affirm that "The United States, were it to become a major buyer of CERs, could play an important role in advocating for these and other reforms. It might do this by pushing for change both at the CDM EB and at meetings of the Conference of the Parties to the UNFCCC. It could also exercise significant influence by simply refusing to allow the use of CERs from projects it deems suspect."[27]

Furthermore, the environmental integrity of CDM projects is already improving and is expected to further improve over time. For example, research by Flues, Dreher & Michaelowa (2008)[28] shows a trend has grown over time towards Executive Board (EB) decisions with increasing environmental integrity. The UN has also noted that the capacity of the Executive Board and the scrutiny of individual projects are improving substantially. Requests for reviews of projects have increased, and many third-party verification issues have been addressed with the EB's release of the "Validation and Verification Manual," which provides clarity and guidance on key parts of the verification process. Methodologies have been consolidated for enhanced clarity and reduced administrative complexity, and the CDM Executive Board has announced that new HFC-23 facilities will no longer be eligible for CDM credits.[29]

---

[25] Schneider, Lambrecht. "Is the CDM fulfilling its environmental and sustainable development objectives? An evaluation of the CDM and options for improvement." Oko Institut, prepared for WWF, November 5, 2007: Page 9.
[26] Michael W. Wara and David G. Victor. A Realistic Policy on International Carbon Offsets. PESD Working Paper #74, April 2008.
[27] Michael W. Wara and David G. Victor. A Realistic Policy on International Carbon Offsets. PESD Working Paper #74, April 2008.
[28] http://www.cis.ethz.ch/events/pastevents/PEIO/Flues.Dreher.Michaelowa_UN.GHG.Reduction
[29] See: http://environment.newscientist.com/article/dn11155-kyoto-protocol-loophole-has-cost-6-billion.html.

Finally, a strong domestic precedent is being set for linkages and allowances of CDM credits and credits from other systems. For example, the amended Lieberman-Warner bill proposed to allow up to 5% CDM credits annually. The state of Massachusetts has likewise announced that, under the state's "7.29" regulations, power plants will be allowed to use EUAs from the EU's ETS, and CERs from the UN's CDM in recognition of a lack of domestically available offset credits useable for compliance. According to their announcement, "MassDEP believes that this determination also supports the evolution of a credible, consistent, and coordinated system for evaluating international offset projects, which could play an important role in future climate change mitigation strategies."[30] Therefore, the claim by some stakeholders that allowing CERs into California would make other jurisdictions less likely to link with us is clearly unfounded.

Geographic Limits to Retain Co-Benefits

Some stakeholders have raised concerns regarding the retention of co-benefits from offset projects in California. For example, the Natural Resources Defense Council argues that, "If offsets are allowed for compliance purposes, they must not only reduce GHG emissions but must contribute to AB 32's co-benefits goals. Any market-based or regulatory program under AB 32 must take into account "localized impacts," must not "disproportionately impact low-income communities," must not increase "emissions of toxic air contaminants or criteria air pollutants" nor interfere with "air quality standards" and efforts to reduce "toxic air contaminant emissions," and must maximize "additional environmental and economic benefits for California" and consider "overall societal benefits." NRDC's comments go on to say that these statutory requirements mean that California's attempts to reduce GHG emissions under AB 32 should also result in reductions of co-pollutants, and other benefits to the health and safety of Californians. NRDC concludes that if offsets do not provide these co-benefits for Californians because they are outside of California, CARB must disallow or strictly limit those offsets in order to secure the overall integrity of the California program and to prevent leakage of co-benefits outside of the state.

The above arguments represent a fundamental misunderstanding of the purpose of offsets, which is to bring real, permanent reductions in greenhouse gas concentrations in a timely, cost-efficient manner as an economy transitions to cleaner technology. Although measures undertaken to reduce GHG emissions may produce simultaneous reductions in emissions of local pollutants, those co-benefits are of secondary concern to the primary goal of fighting global warming. Undoubtedly, reducing local air pollutants is a worthwhile objective. That goal, however, is far better served by direct measures, such as increased restrictions on emissions of the local pollutants. The same can be said of the co-benefit of spurring technological innovation, which can be likewise be achieved more directly through policies like the low carbon fuel standard, tax-incentives for increased research and development, etc. As such, policymakers should focus on using offsets for their fundamental purpose of combating climate change**.**

The MAC report again supports this position: "The Committee acknowledges the importance of promoting fundamental improvements in technology, and of providing strong incentives for pollution reductions in urban areas and other areas suffering from low environmental quality. However, most Committee members feel that binding quantity limits on offset credits do not offer the best way to address these issues. The better approach to achieving long-term technology transformation goals in certain sectors is to employ direct technology-promoting policies (such as the low carbon fuel standard, vehicle emissions standard, and various tax-incentives for increased research and development). In areas

[30] Point Carbon. "Massachusetts emissions program to allow EUAs, CERs." Washington, D.C.: June 3, 2008.

that experience poor air quality, tighter restrictions on emissions of the relevant local pollutants (as opposed to greenhouse gases) is the most direct way to address this problem."[31]

Furthermore, while NRDC correctly notes that AB 32 requires consideration of, e.g. toxic air contaminant emissions and overall societal benefits, this is a requirement of the program as a whole, not necessarily each individual component (like an offsets program). In other words, AB 32's implementation, taken as the sum of many parts, must achieve the goals outlined in NRDC's comments. However, expecting each individual component part to achieve all goals in neither practical nor likely, and sets the program up for certain failure.

Finally, if California insists on establishing a mechanism to retain co-benefits in the region, we recommend providing carrots, not sticks, to encourage this**.** Possible examples include:

1) Streamlining of air and water permitting processes with offset protocols to remove regulatory barriers, ensure the process is not unnecessarily complicated or expensive, and thus make offset projects within the region more attractive and easier to develop
2) Providing incentives for credits that represent socially desirable co-benefits
3) Hosting conferences and trade shows for farmers, foresters, etc. in California to educate them on the opportunities for offsets in their sector, and to encourage project development
4) Creating grant funding opportunities from state and/or regional entities to be used at offset projects in the region, so long as these opportunities do not undermine project additionality

Quantitative Limits

Quantitative limits on the use of offsets bring no economic or environmental benefits and, like geographic limits, should be avoided in favor of rigorous standards for environmental integrity. Stringent standards will ensure that only additional, high-quality offsets can be used for compliance. High standards will in turn provide a natural limit on the total number of offsets allowed, as a result of market forces. The introduction of artificial limits only invites market distortion and limits the flexibility of the emissions reductions program, unnecessarily increasing overall compliance costs. As mentioned in the context of geographic limits, quantitative restrictions can actually lead to *increased* emissions if compliance costs become so high that leakage results.

Returning to the issue of natural limits, while many stakeholders seem to believe that offsets (especially those from international sources) are nearly limitless in supply, EcoSecurities' experience as a developer of such projects over the past 11 years demonstrates that this is flatly untrue. Confirming this, a February 2008 report from New Carbon Finance indicated that, while future *demand* for reductions generated in the US would be on the order of approximately 1,600Mt/yr, "analysis has shown that there is unlikely to be much more than 530Mt/yr available [domestically] of which only 380Mt/yr is eligible."[32] They also note that even for international offsets under the CDM, "Thus far… only 100Mt of credits have actually been issued. This will increase to more than 400Mt/yr in the future, but serves as a good example of how long it takes for a credit pipeline to build up to a sufficient volume of emission reductions."[33] These figures clearly demonstrate that there is a finite pool of offsets available. Furthermore, US companies will be competing for these limited resources with companies from other systems like the EU ETS, Japan, and

[31] MAC report, page 65.
[32] New Carbon Finance, North America White Paper - February 2008.
[33] Ibid, page 10.

Australian ETS. Acknowledging these points, the rationale that quantitatively limiting offsets is necessary to protect California's market from being flooded by cheap international credits is simply unfounded.

As noted earlier, studies across the board, by everyone from EPA to NRDC, have demonstrated the direct relationship between the cost of a GHG reduction program and the quantity of offsets allowed into the system (See Figure 2).

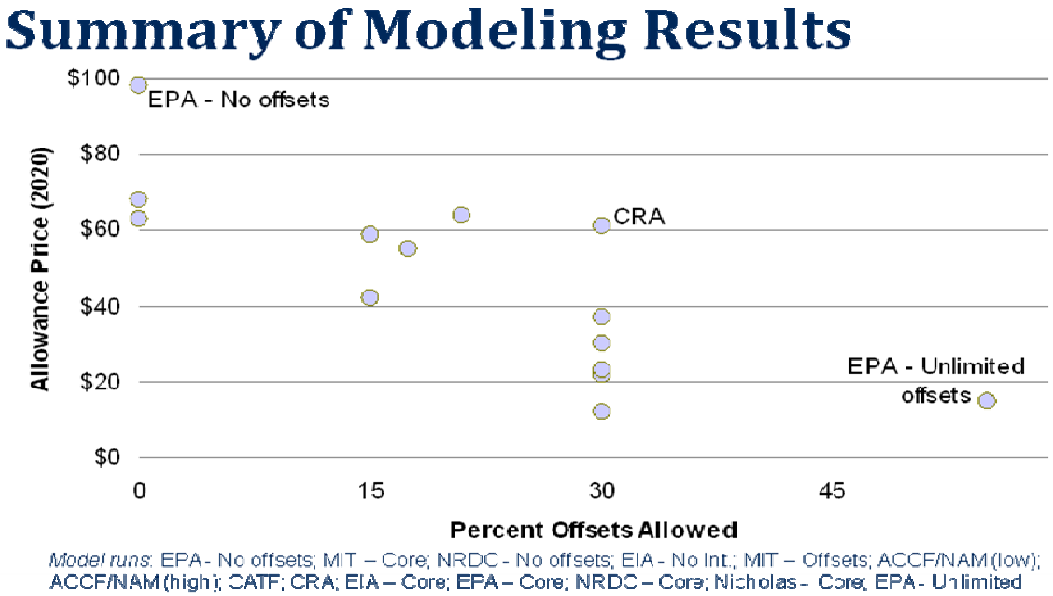


Figure 2. From the presentation "Understanding Offset Projects and Cost Containment," given by Michael Gillenwater on May 19, 2008 at a Congressional Staff Briefing in Washington, D.C.

Finally, arbitrary quantitative limits reduce the size of the offsets pool, but do nothing to change the proportion of low-quality credits that get through. The objective of reducing emissions would be far better served by holding an unrestricted pool of credits to rigorous standards, thereby increasing the number of high quality offsets representing real emissions reductions. This would enhance the environmental integrity of the system while avoiding harmful perversions of the market (See Figure 3).

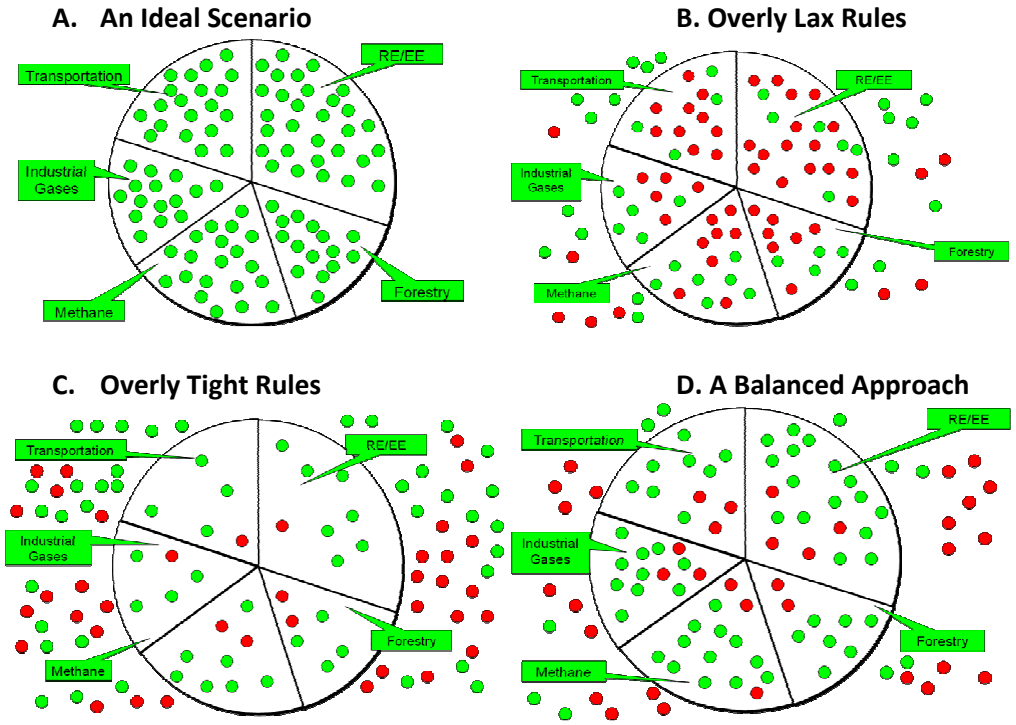
To be clear, EcoSecurities is not opposed to the concept of supplementarity[34], so long as it is based on a robust understanding of the market and the forces of supply and demand. In particular, a supplementarity rule should not be so stringent as to discourage the development of offset projects by introducing unnecessary uncertainty and dampening demand signals.

A supplementarity rule of 50% would likely be sufficient to promote broad development of offsets while still requiring the facility-level reductions necessary to force infrastructural changeover. The limit on offsets of 10% of the compliance obligation for an individual firm suggested in the Scoping Plan, however, is far too low to spur widespread development of emissions reductions projects. [35] In addition, interactions of offset limits may mean that if a 10% limit is imposed, also imposing geographical and project type limits will make offsets more expensive and undermine their ability to contain costs and

[34] Supplementarity allows that offsets will be used to supplement domestic action to fight global warming.
[35] P 19 of AR 32's Scoping Plan

achieve broader emission reductions from off-system sources. Finally, if offsets can also be used to reduce carbon fee and regulatory burdens (as the Scoping Plan suggests on 44), a percentage limit (e.g. 10%) on the cap-and-trade component of the total emissions budget only would actually result in a much smaller pool of offsets available to meet compliance obligations. Thus any quantitative limits should be applied to the total emissions budget of the state.

Figure 3. Additionality of Offset Projects Under Various Scenarios Where Limits Are Imposed.
(Green dots represent environmentally additional projects; red dots indicate non-additional projects.)



Discounting

We were pleased to see no mention of discounting offsets in the Draft Scoping Plan. Discounting can unnecessarily complicate the accounting of an offset system, and can also introduce unnecessary market distortions. Discounting for quality in particular is troublesome, as it implies degrees of environmental integrity. It would be better to recognize only environmentally equivalent reductions, and treat risk of failure or reversal at the point of compliance.

As noted by the WRI, "A simpler and less arbitrary approach would be to require the use of lower bound estimates for project sequestration, and upper bound estimates for baseline sequestration (e.g., within a 95% confidence interval). The reverse would apply to estimates of project and baseline emissions. Such an approach would generate conservative estimates of project removals/reductions and maintain an incentive for improving measurement accuracy, while avoiding the need for arbitrary discounts."[36]

[36] World Resources Institute. Perspectives piece in "Designing Offsets Policy for the US: Principles, Challenges, and Options for Encouraging Domestic and International Emissions Reductions and Sequestration from Uncapped Entities as part of a Federal Cap-and-Trade for Greenhouse Gases." By Lydia Olander; published by the Nicholas Institute for Environmental Policy Solutions at Duke University, May 2008.

Benefits of allowing the use of offsets certified by other trading programs

As mentioned above, EcoSecurities generally supports the inclusion of offsets from other compliance systems such as the WCI, RGGI, the CDM, and the EU ETS, as well as some fungibility from other voluntary offset systems such as the VCS and CCAR (these credits can be awarded to incent early action). We do not support the use of renewable energy certificates (RECs) as offsets, voluntary or compliance.

The Voluntary Market

As noted in the Scoping Plan on page 45, "Voluntary offset markets have recently flourished as a way for companies and individuals to offset their emissions by purchasing reductions outside of their own operations… ARB believes voluntary effort to reduce GHG emissions will play an important role in meeting the State's overall GHG goal. ARB encourages all Californians to take voluntary action to reduce their carbon emissions, and recognizes the importance that this type of voluntary action can have in creating support for and momentum toward GHG emission reductions." We were pleased to see ARB's acknowledgement of the important role the voluntary market can play, and would encourage ARB to promote certainty for voluntary market players by providing clarity as to whether voluntary early offsets will be acknowledged as credits for early action.

On page 45, the Scoping Plan goes on to mention that "As specified in AB 32, ARB will adopt methodologies for quantifying voluntary reductions. (HSC §38571) The Board has adopted a methodology for forest projects in October 2007, and is scheduled to consider methodologies for dairy digester projects and additional forest projects later this year." We would encourage ARB to develop these methodologies as soon as possible; doing so will enable project developers like EcoSecurities to begin investing in emission reducing activities as soon as possible.

We would also encourage ARB to avoid reinventing the wheel by approving voluntary methodologies that already exist. Where the voluntary market has created and adhered to consistent standards, such as the California Climate Action Registry (CCAR), the Voluntary Carbon Standard (VCS), and the EPA Climate Leaders Program, protocols should be approved and the resulting offsets should be considered for fungibility into the California system. Doing so would reward the efforts of entities that develop and/or purchase offsets prior to implementation of the mandatory program and send clear market signals to facilitate development of projects that reduce GHG emissions. It thus serves as an incentive for entities to reduce emissions as soon as possible, even *before* implementation of a mandatory program, in a way that is environmentally robust. This also creates liquidity in the offset market, so that tons are available at the start of the program. Of course, allowing fungibility of voluntary credits must be balanced with care not to flood the market with low quality credits from voluntary programs that have questionable standards.

In addition, EcoSecurities would request clarification on the ARB's Voluntary Early Action Policy Statement. Although the ARB has stated that they will provide Executive Orders "approving" individual voluntary early activities, no clarification has been provided on what standards might exist for such projects, what processes project proponents should go through to acquire such EOs, etc. This lack of transparency inhibits the ability of project developers to begin investing in projects. We are also concerned that anything short of a transparent process could result in the approval by ARB of projects that could generate non-additional and/or low quality offsets from a perspective of environmental integrity. We would therefore encourage the ARB to clarify the processes and procedures for getting voluntary early actions approved as soon as possible.

Program Administration
We support the establishment of a regional organization through the WCI to administer the cap-and-trade component of AB 32 implementation, and would encourage that such an organization will be built on and reflect the work already undertaken by the Climate Registry, the California Climate Action Registry, the Climate Action Reserve, and others.

Project Approval and Quantification
We were disappointed to see very little clarity in the Scoping Plan on the project approval and quantification processes. Therefore, we would echo past comments we have submitted and recommend that as soon as possible, ARB begin developing an initial set of approved offset protocols and project types. We would emphasize the importance of using and adapting existing protocols as appropriate, for example, those developed through the Clean Development Mechanism (CDM), the California Climate Action Registry (CCAR), the Voluntary Carbon Standard (VCS), EPA Climate Leaders, etc. Project developers like EcoSecurities have already developed significant experience developing emission reduction projects to these protocols, which have been vetted by international organizations, stakeholder groups, etc. Reinventing the wheel by having the California create its own protocols would be redundant, unnecessary, and would create significant work for project developers who would have to learn a whole new set of project protocols.

Acknowledging the paramount importance of environmental credibility while recognizing the inherent flaws of relying on a case-by-case approach, the growing consensus among the emerging US and voluntary offset systems suggests the inclusion of a standards-based method of project approval. The Market Advisory Committee likewise recommended such an approach to ensure environmental integrity and reduce administrative complexity of the approval process.[37]

A significant advantage of the standards-based approach is that it lowers transaction costs and reduces analytic subjectivity. This is because counter-factual baselines need not be produced for each individual project. Avoiding project-specific baselines is less expensive and lowers transaction costs for both the project developer and for the overall system, since each baseline does not have to be negotiated and verified independently. Using benchmarks also reduces the subjectivity of baselines, since projects within a given category and region are subject to the same assumptions. Critics of a standards based approach may argue that some projects deemed additional under this method may have indeed happened anyway. This however, is missing the spirit of additionality which is to drive emissions reductions that go beyond business as usual. Clearly a project exceeding a specific benchmark, by definition, meets this standard. Moreover, a key purpose of the project based mechanisms is to accelerate the drive of technology into uncapped parts of the economy – a result which is far likelier within a predictable framework with lowered transactions costs.

Once guidelines are established, developing benchmarks can be quite straightforward. Indeed, many entities are already figuring out ways to deal with these questions. The California Climate Action Registry (CCAR) is perhaps the best example of implementation of a "benchmarking" approach. As explained on CCAR's website, "Registry staff develop standardized greenhouse gas reduction project protocols for specific industry sectors that are based on internationally recognized best practices. The protocols are created by stakeholder work groups representing the industry, government, science, and environmental

[37] "Recommendations of the Market Advisory Committee to the California Air Resources Board." p 63, 30 June 2007. http://climatechange.ca.gov/publications/market_advisory_committee/2007-06-29_MAC_FINAL_REPORT.PDF.

sectors, and are vetted through a formal public review and comment process before being published on our website for the public to use." The International Emissions Trading Association (IETA) also advocates a standards-based approach complemented by a case-by-case option, and the Voluntary Carbon Standard (VCS) provides three options for determining additionality including (i) case-by-case (ii) performance standards, and (iii) a technology positive list.

Project Start Date

EcoSecurities urges the announcement of a project start date as soon as possible to incentivize early reductions in greenhouse gas emissions. By announcing the earliest date from which credits will be granted, ARB will provide investor certainty and ensure the availability of a sufficient supply of credits when the program begins.

Project Crediting Periods

EcoSecurities would encourage California to establish a fixed crediting period, whereby additionality is assessed up front for a set number of years and when the period expires, additionality is reassessed before more credits are approved. A fixed crediting period of, e.g. 7-10 years, is essential to creating investor certainty and securing debt financing, because truly additional projects rely on a predictable stream of revenue from the sale of credits over a period of time to recoup upfront investments. Fixed crediting periods also spur innovation by allowing for larger upfront investments.

Of course, establishing a crediting period in a project protocol requires balance. Make the crediting period too short, and the inherent risk to the return on investment may preclude interest in pursuing a project. This undermines one of the most important merits of project protocols—their ability to mobilize private capital to make immediate investments in GHG emissions reductions that can help stem dangerous climate change. Make the crediting period too long, and there is a risk of allowing an excess of non-additional credits to be generated, undermining their value overall (both financial and environmental). A reasonable balance between these two considerations must thus be the goal of any project protocol seeking to encourage meaningful investment in GHG emission reductions.

Every credible offset protocol that currently exists, including Alberta, CDM, JI, VCS, etc., provide for fixed crediting periods that protect the generation of credits by requiring the assessment of additionality (including regulatory additionality) only at the beginning of each crediting period. For example, Alberta recommends one 8-year crediting period, and the CDM allows either one 10-year fixed crediting period, or 7-year crediting periods which may be renewed twice (for a total of 21 years).

Protocols Used to Determine Eligibility

As mentioned above, in addition to any protocols developed by the state, all protocols developed through the Clean Development Mechanism (CDM), the California Climate Action Registry (CCAR), the EPA Climate Leaders Program, and others should be allowed to determine the eligibility of proposed offsets. We believe that these existing protocols are acceptable for use in California, but additional protocol development should be encouraged as well to promote innovation and the achievement of the greatest possible reductions.

Expert Panel

We support the creation of an offsets experts panel to help guide the implementation of a California offsets program, particularly in the areas of offset project methodology development and other technical

issues. EcoSecurities' staff has served on technical stakeholder panels with CCAR, TCR, and has developed over 18 methodologies over the CDM. We would be honored to apply our expertise to the development of methodologies under the California system. Therefore, we request that such a technical expert panel be created to guide the development of offset project protocols and other guidance as needed, and that we be allowed representation on any such panel.

Conclusion

Thank you very much for the opportunity to provide comments to the Air Resources Board regarding the draft Scoping Plan for AB 32. If EcoSecurities can provide more detailed information, research, or other guidance with respect to offsets either in person or in writing, we would be happy to do so in the future. Thank you for your attention and for this opportunity to contribute our thoughts to this important process.

Sincerely,

Aimee Barnes
Manager, US Regulatory Affairs
EcoSecurities
Email: aimee.barnes@ecosecurities.com
Direct line: (909) 621-1358