September 11, 2009

Mr. Kevin Kennedy
California Air Resources Board
1001 I Street
Sacramento, California 95812

Subject: Comments on International Offsets in a California Cap-and-Trade Program

Mr. Kennedy:

These comments are submitted by the Offsets Working Group (OWG), a collaborative team of publicly-owned electric utilities.[1] The OWG provides these comments from the viewpoint of covered entities that will have compliance obligations under the Air Resources Board's (ARB) AB 32 regulations. These comments are responsive to the specific questions posed by ARB staff during the July 30, 2009, public meeting to discuss "International Offsets in a California Cap-and-Trade Program." The positions set forth herein by the OWG are based on the presumption that international offsets will be subject to rigorous quality standards consistent with AB 32 that will be defined through regulations established by ARB as part of an open and public process.[2]

Q1: Should ARB accept existing international offsets?

A1: The OWG supports the incorporation of international offsets in ARB's cap-and-trade program.

1. **There are several key reasons for accepting international offsets.** The first reason to accept international offsets is cost containment: for both the society as a whole and for the ratepayers of California's electric utilities. International offsets will serve to keep the costs of emission reduction compliance predictable and not overly burdensome, thereby achieving the largest reduction of emissions for the financial resources that are

[1] The OWG includes representatives from Modesto Irrigation District, City of Redding, City of Roseville, Sacramento Municipal Utility District, and Turlock Irrigation District. These utilities comprise approximately 1/3 of the electricity load in California served by publicly-owned electric utilities.

[2] All emission reductions under a market-based program must be real, permanent, quantifiable, verifiable, enforceable, and additional. Cal. Health & Safety Code § 38562(d)(1)-(2).

allocated.[3] The second reason is to allow California entities the ability to encourage emission reductions by the world's developing countries and augment real GHG emission reductions throughout the world.[4] A third reason is that expanding the opportunities for developing international offsets will likely encourage more emission reduction innovations at uncapped sources than would otherwise occur had international offsets not been available.[5]

2. **Cost is an essential consideration in virtually every local government decision and the AB 32 program must be designed whereby compliance may be achieved in the most cost-effective manner.** Emission reduction programs that exceed a society's budgetary constraints will not occur easily, despite their environmental value.[6] This principle surely applies to local governments whose operations are limited to revenues received from their constituents and ratepayers. AB 32 requires that the AB 32 emission reduction program shall be cost-effective.[7] The AB 32 Scoping Plan recommends that ARB establish a market-based system that sets a hard cap on emission levels and allows the compliance costs to seek out their own levels.[8] ARB must consider mechanisms that allow the covered entities' to control their compliance costs while at the same time contributing to the overall reduction in global CO_2 levels.

   The cost-effectiveness (i.e., the efficiency) of one environmental program as compared to another is gauged by its ability to achieve certain environmental targets at a lower cost.[9] Said differently, the immediacy of this global issue requires the most cost-effective program that can be developed and implemented. ARB should strive to incorporate program design elements that enable the lowest costs for AB 32 compliance while preserving environmental integrity. The OWG believes that one key element is permitting covered entities to procure offset credits that meet ARB's required offset quality standard. International offsets are a tool to enable covered entities to meet the mandatory cap by increasing the quantity of fungible instruments for demonstrating AB 32 compliance and achieving goals of reducing global CO_2 levels.[10]

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[3] Ramseur, J.L., 2008. *The Role of Offsets in a Greenhouse Gas Emissions Cap-and-Trade Program: Potential benefits and Concerns*, CRS Report for Congress RL-34436, at 3, 12-13, 24; Wara, M., Victor, D.G., 2008. *A Realistic Policy on International Offsets*, Program on Energy and Sustainable Development Working Paper #74, at 5, 7, 23; Natural Resources Defense Council Policy Brief, 2009. *Reducing Pollution Outside of the Carbon Cap: The Role of Offsets and Complementary Policies*, at 2; Anger, N., Sathaye, J., 2008. *Reducing Deforestation and Trading Emissions: Economic Implications for the post-Kyoto Carbon Market*, LBNL-73746, at 15-18, 23.

[4] Edmunds, J., *et al*., 2007. *Stabilizing CO2 Concentrations with Incomplete International Cooperation*, Pacific Northwest National Laboratory PNNL-16932; Ramseur, at 12, 17, 24; NRDC Policy Brief, at 2.

[5] *See* Offset Quality Initiative, *Ensuring Offset Quality: Integrating High Quality Greenhouse Gas Offsets into North American Cap-and-Trade Policy*; Ramseur, at 3, 12, 17, and 24.

[6] To be sustainable, an ecosystem management program must be environmentally sound, economically feasible, and socially desirable. Zonnevelt, I.S., 1990. *Changing Landscapes: An Ecological Perspective*, Springer-Verlag Press.

[7] ARB shall consider cost-effectiveness in the AB 32 program design and seek to minimize costs and maximize the total benefits to California. Cal. Health & Safety Code § 38562(b)(1), (5); AB 32 defines "cost-effective" or "cost-effectiveness" to mean "the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential." Cal. Health & Safety Code § 38505(d).

[8] Climate Change Scoping Plan (Dec. 2008), at 30-38.

[9] Edmunds, at 6.1-6.2.

[10] *See generally* Anger (determining that allowing credits for avoided deforestation could reduce compliance costs by 50%).

3. **The principle of cost containment does not require the sacrifice of offset quality or environmental performance.**[11] On the contrary, excluding international offsets from the ARB program may lower the overall quality of the offset pool.[12] Some commenters suggest that capping the amount of offsets available to covered entities will adversely impact the quality of available offset projects as it would push entities to invest in the lowest cost projects and not necessarily the best projects that have the potential to achieve greater emission reductions.[13] The OWG agrees that all offset projects should adhere to a rigorous standard established by ARB. The global location of GHG emission reductions from offsets is not as important as ensuring that the offsets allowed best achieve the overall goal of reducing GHG emissions. Therefore, ARB's program should not be artificially restricted by any short-sighted failure to acknowledge the international scope of the *global* warming problem. ARB's regulations should not give precedence to narrowly defined "local" benefits over offset opportunities that would provide real improvements in the global atmosphere.

4. **Generally, the OWG members recognize the benefits of domestic offsets and direct emission reductions within the communities they serve.** The OWG members fully recognize that the non-GHG related environmental and economic benefits from offset projects are primarily local. With this preference stated, the OWG members also believe that having the options to invest in offsets beyond their limited local communities and on an international level are important to achieving the goals of AB 32. In addition to the economic arguments stated above the availability of a global offsets market is important because: (1) a feasible international offset opportunity may have significantly greater social benefit than a domestic or local offset; or (2) an OWG member may not be able to find a nearby or even statewide offset of the right size, duration, and other locally specified characteristic to fit the need.[14] It is important to recognize that ensuring the availability of such an option will keep down the day-to-day costs of doing business for our low-income and mainstream customers. This is a direct local benefit and a primary local concern of all OWG members.

5. **Emission reduction programs in the developed countries should encourage emission reductions internationally to help reduce emissions in developing countries.** Climate change is a global issue, and requires the stabilization of *global* concentrations of CO_2.[15] Reductions must occur internationally in order for a global solution to occur.[16] As one of

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[11] NRDC Policy Brief, at 5-6.

[12] Wise, M., et al., 2009. *Implications of Limiting CO_2 Concentrations for Land Use and Energy*, 324 SCIENCE 1183, 1185.

[13] Wara, at 20.

[14] Offset Quality Initiative at 9-10; *See e.g.*, Wallack, J., Ramanathan, V., 2009. *The Other Climate Changers: Why Black Carbon and Ozone Also Matter*, 88 FOREIGN AFFAIRS 5.

[15] Edmunds, at 1.1.

[16] According to the Intergovernmental Panel on Climate Change, the greatest two sources of the CO_2 emissions since the pre-industrial period are fossil fuel use and land-use change. Some reporters estimate that annual fossil fuel CO_2 emissions were 25.3 to 27.5 $GtCO_2$ per year in 2000–2005. Emissions associated with land-use change were estimated to be 5.9 $GtCO_2$ per year in the 1990's and closer to 8 $GtCO_2$ in the 2000's. *See* IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press; The IPCC values match the U.S. GHG emissions of approximately 7 $GtCO_2$ in the same time period as reported by the DOE and dwarfs

the largest economies in the world,[17] California should continue to leverage its influential position by engaging the international community with its environmental programs whenever possible.

6. **Allowing California's covered entities to purchase international offsets will put a price on international carbon and reduce chances for emissions leakage out of the U.S.**[18] The use of international offsets will also provide a carbon price signal to developing countries in advance of their eventual participation in a global capped regime.[19]

7. **Deforestation accounts for approximately 20% of the world's GHG emissions, therefore, emission reduction plans in the developed countries should engage this source.**[20] Deforestation is the world's single largest source of GHG emissions from land-use change and the vast majority of these emissions are outside the United States.[21] Moreover, emission trends show that developing countries are causing an increasing proportion of the world's GHG emissions. Land-use change is closely tied to development, where local resources (forests) are turned for acreage to support the supply of other resources such as ethanol, as has been demonstrated over the last several years.[22] With such a large proportion of emissions coming from the developing countries, limiting the access to international offsets may make it impossible to achieve global emission reduction goals.[23] In fact, international deforestation may even increase if a carbon value is not placed on international forests through an offset mechanism.[24] Promoting international forestry and agricultural emission reductions are necessary long-term strategies along with other mitigation options.[25] Commenters acknowledge the importance of reducing international deforestation, and note that timing is very important, too.[26] Incentives for achieving international emission reductions should be instituted earlier rather than later since the delayed participation of any emission source in an environmental program will decrease the programs' efficiency and increase the cost to

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California's reduction goal of 0.174 $GtCO_2$. Greenhouse Gas Emissions in the United States 2007: Report # DOE/EIA-0573(2007), released December 2008.

[17] Depending upon the informational source one uses, California's economy ranks between the 5th and 10th largest in the world.

[18] Offset Quality Initiative, at 5 (stating that a key criterion for any program is the capability to monitor the potential for leakage); Ramseur, at 3, 12, 17, 24. ARB shall design the AB 32 regulations to minimize leakage. Cal. Health & Safety Code § 38562(b)(8).

[19] Edmunds, at 7.1.

[20] Sathaye, J., et al. *GHG Mitigation Potential, Costs and Benefits in Global Forests: A dynamic partial Equilibrium Approach*, LBNL-58291, at 24-30, 32-34 (evaluating six scenarios and concluding that reducing deforestation may account for "51%-78% of the carbon benefits gained by 2100."); Asner, G.P., 2008. *Measuring Carbon Emissions from Tropical Deforestation: An Overview*; NRDC Policy Brief, at 6.

[21] IPCC Summary at 2. Dixon, R.K., et al., 1994. *Carbon Pools and Flux of Global Ecosystems*, 263 Science 185, 190.

[22] IPCC Summary at 3.

[23] Asner, at 2; NRDC Policy Brief, at 6; *See generally*, Edmunds.

[24] Wise, at 1185.

[25] Sohngen, B., Sedjo, R., 2006. *Carbon sequestration in global forests under different carbon regimes*, THE ENERGY JOURNAL; Pacala, S., Socolow, R., 2004. *Stabilization Wedges: Solving the Climate Problem for the Next 50 years with Current Technologies*, 305 SCIENCE 968; NRDC Policy Brief, at 6.

[26] Sathaye, at 32-34.

society.[27] The OWG members agree with the foregoing and recommend that early action and/or offset credits be given to those entities participating in such programs if investments are made prior to the start of any cap-and trade program.[28]

Q2: Should ARB accept project-based offsets, accept sectoral crediting only, or a combination of the two?

A2: At this early stage the OWG recommends that ARB investigate all options and so the OWG supports a hybrid approach, recognizing both project and sectoral based offsets. The OWG offers its thoughts on principles that should be applied as ARB develops the rules.

1. **The project-based approach may offer certain benefits by encouraging innovations that achieve quality emission reductions.**[29] Some commenters use the failures of the Clean Development Mechanism as examples of why project-based approaches should not be used. Yet, these failures only cast doubt upon the value of certain project types and not against the entire project-based method. The OWG believes that as long as ARB establishes rigorous offset quality criteria consistent with AB 32, project-based international offsets projects should be considered for compliance within ARB's program, particularly in early years when sectoral approaches have not been sufficiently developed.[30] In order to ensure the compliance quality of the offsets, it may be necessary for ARB to consider and adopt, through an open and public process, a list of identified eligible offset project types.[31] Any such list should contain some flexibility for the addition of new project types as new technologies develop. Under this scheme, covered entities would be authorized to utilize offsets generated by eligible offset project types within ARB's program regardless of their location.

2. **The sectoral crediting approach may provide a more systematic future mechanism for providing quality offsets.** The standardized assessment under a sectoral approach could provide benefits due to its administrative simplicity, reduced transaction costs, and greater certainty in regard to compliance with AB 32 standards.[32] ARB should continue to explore the sectoral option, and should consider accepting offsets derived from a sectoral approach after determining that the quality of the offsets are sufficient. Some caution is in order as a sectoral approach may be relatively more dependent upon enforceable agreements with other countries, and Constitutional issues may be implicated if California attempts to establish binding obligations with a foreign nation.[33]

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[27] Edmunds, at 6.1-6.2, 7.1; Anger, N., Sathaye, J., 2008. *Reducing Deforestation and Trading Emissions: Economic Implications for the post-Kyoto Carbon Market*, LBNL-73746.

[28] ARB shall encourage early actions to reduce GHG emissions. Cal. Health & Safety Code § 38562(b)(1).

[29] Offset Quality Initiative, at 6; NRDC Policy Brief, at 12.

[30] Wara, at 23; *See* Offset Quality Initiative.

[31] NRDC Policy Brief, at 8.

[32] Offset Quality Initiative, at 7.

[33] Article 1, section 10, clause 1 of the U.S. Constitution provides that "[n]o State shall enter into any Treaty, Alliance or Confederation." Moreover, Article 1, section 10, clause 3 provides that "[n]o State shall, without the Consent of Congress . . . enter into any Agreement or Compact with another State, or with a foreign Power . . . ." The U.S. Department of State has assisted U.S. states and foreign nations in developing language for non-legally binding arrangements that will not violate the U.S. Constitution. Therefore, although California is not completely constrained from establishing certain types of international cooperative agreements, they may lack any real enforcement value.

3. **The hybrid approach will offer the benefits of both approaches as long as ARB uniformly applies high quality standards.**[34] At this stage, ARB should continue to investigate and evaluate both the sectoral and project-based approaches with the goal of developing a program offering the greatest opportunities for cost-effective AB 32 compliance by covered entities. ARB should develop an offset program that allows the greatest number of offset opportunities for covered entities as long as the necessary quality criteria are met. If ARB selects only one approach (i.e., either project-based or sectoral crediting), this would reduce the amount of eligible offset opportunities. If ARB follows a hybrid approach, ARB should first adopt the necessary offset quality standards, and then consider the specifics related to project-based or sectoral approaches.[35]

Q3: How could ARB enforce international offsets?

A3: ARB has several options for ensuring that international offset credits meet the AB 32 standards when used by a covered entity. The OWG offers the following principles for ARB's consideration.

1. **ARB should rely on strict qualifying criteria for international offsets and dependence upon certification to those criteria by specific international organizations, as well as explore the establishment of mechanisms to "true-up" reductions from offsets where evaluation shows such modification is necessary.** ARB has the authority to implement restrictions on the types of offset projects and offset credits that are used to comply with AB 32. The OWG acknowledges that California has entered into a number of important collaborative arrangements with other countries concerning climate change and other environmental issues. Yet, these arrangements do not establish any caps or standards and do not create any legally binding rights or obligations in which one jurisdiction could enforce the actions or laws of another jurisdiction.[36] Nevertheless, ARB should coordinate its regulatory policies with international mechanisms such as the Clean Development Mechanism (CDM) under Kyoto. International approaches such as the CDM, exist and produce certified emission reductions (CERs) that could be used in California's program. Approving CERs or similar offsets would require evaluation of the issuer's process to ensure that the reductions are real, verifiable, additional, and possess other attributes required under AB 32. In addition, the ARB program must be adaptable to integrate

[34] Offset Quality Initiative, at 12, 14. The Offset Quality Initiative advocates the use of "programs of activities" which entails the aggregation of many small projects using a similar emissions reduction technology.

[35] ARB should accept offset credits for avoided deforestation in tropical regions around the world even if no other international offset type is sanctioned for AB 32 compliance.

[36] *See, e.g.*, United Kingdom and California Announcement on Climate Change and Clean Energy Cooperation; MOU on Environmental Cooperation Between the California Environmental Protection Agency, California Department of Food and Agriculture, and California Resources Agency of the State of California, United States of America and the Ministry of Environmental & Natural Resources of the United Mexican States, Feb. 13, 2008; Memorandum of Understanding Between the State of Victoria and the State of California for Collaboration on Climate Change Action, May 4, 2007; Oil Spill Memorandum of Cooperation, May 8, 2001 (British Columbia, Alaska, California, Hawaii, Oregon and Washington agreement on oil pollution); *See* Hollis, D. (2009). *Unpacking the Compact Clause* (providing a comprehensive review of "state-nation" collaborations and proposing that globalization has produced a proliferation of "agreements" that may actually violate the Compact Clause).

with the federal program so that any offsets generated are not later determined to be non-compliant with federal law.[37]

2. **ARB should evaluate the efficacy of a program incorporating a downstream enforcement mechanism on the ARB-jurisdictional covered entity and the use of buffer pools.**[38] Even if California cannot exert its jurisdictional authority internationally, that is no reason to reject the use of international offsets for compliance in California's AB 32 program. This is because California does have jurisdiction over the covered entities in California as the downstream "users" of offset credits. In other words, California does have the authority to evaluate and enforce the quality of the offset credits that are used for compliance by covered entities.

   ARB should also explore using a "buffer-pool" concept to shore up its enforcement capability. In addition to depending upon specific acceptance criteria and verified certification by international organizations, ARB could consider requiring all covered entities using international offsets to bank a calculated number of offsets into a collective buffer pool following the same principles as the Climate Action Reserve's Forest Project Protocols.[39] The buffer pool would act as an "insurance policy" against project reversals or subsequent determinations that the offset credits failed ARB's quality criteria. In these cases, ARB would nullify any compliance credit that the covered entity had received and then retire the relevant amount of credits from the buffer pool. This method gives ARB a final "assurance" authority over international offset quality and ensures that global emission reductions are actually achieved. This method would lower the transaction costs of meeting certification, monitoring, audit, and other administrative requirements.[40] For either the sectoral crediting or project-based approaches, keeping transaction costs low is an important concern. Although the buffer pool concept does add an ex ante cost, it may be easily calculated before entering the project and it is proportionate with the project scale.

3. **In regard to offsets from avoided deforestation, remote monitoring and verification may be used for the purpose of enforcement.**[41] Existing technologies and methods are being used in many tropical forests to monitor and measure deforestation with a very high degree of accuracy.[42] Some commenters state that the primary impediments to accurately measuring global deforestation "are not scientific or technical, but rather political, institutional and budgetary."[43] These existing

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[37] The OWG requests ARB staff to provide information to all stakeholders that describes ARB's plans for incorporating the California programs into the prospective programs.

[38] Climate Action Reserve (CAR) Forest Project Protocols, Version 3.0, adopted by the CAR Board on September 1, 2009.

[39] CAR Forest Project Protocols, at 54-56.

[40] Repretto, R., 2002. *Efficient Enforcement Approaches in Emission Offset Programs: Implications for Large and Small Projects*, Institute for Policy Research & Implementation University of Colorado at Denver.

[41] DeFries, R., et. al., 2006. Reducing Greenhouse Gas Emissions from Deforestation in Developing Countries: Considerations for Monitoring and Measuring, Report of the Global Terrestrial Observing System (GTOS) number 46, GOFC-GOLD report 26; Asner, at 1.

[42] *See* Asner (stating that 55% of the deforestation is occurring in only 6% of the tropical "biome" and that it is currently being measured and monitored).

[43] *Id.*

technologies could be integrated into the downstream-enforcement/buffer pool program design.

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The OWG thanks ARB staff for evaluating and considering the foregoing comments.

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Wes Monier, Turlock Irrigation District

Mike Bloom, City of Roseville

Elizabeth Hadley, City of Redding

Tim Tutt, Sacramento Municipal Utility District