



August 11, 2011

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Dear Steve and Rajinder,

Congratulations on releasing the 15-day *Notice of Public Availability of Modified Text for the Proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Regulation*. Attached are our comments on the Modified Text.

The American Carbon Registry (ACR) appreciates the significant improvements made in the regulation and commends ARB's diligence and responsiveness to stakeholder concerns. The comments below are submitted in the spirit of collaboration and continuous improvement. We believe ACR's offset protocols, carbon registry, and technical expertise can help ARB ensure adequate supply of real, additional, permanent, verifiable, and enforceable greenhouse gas offsets at the start of your cap-and-trade program in 2013.

ACR offers its published offset protocols as the potential basis for ARB compliance and/or early action offset protocols. These include our pneumatic controllers and fertilizer management protocols, as well as a series of additional protocols currently in our review process that may be appropriate for ARB's consideration in the future.

Thank you again and please feel free to contact me with any questions at nmartin@americancarbonregistry.org or (703) 842-9500.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nicholas Martin', with a stylized flourish at the end.

Nicholas Martin
Chief Technical Officer, American Carbon Registry

ACR COMMENTS ON 15-DAY NOTICE

We have arranged our comments in two sets. The first set represents changes we believe are key to ensure a smoothly functioning offset program, adequate supply of high-quality offsets, and to ensure quality and reliability in the functioning of third-party Offset Project Registries. The second set represents more minor changes or clarifications that we believe would be helpful.

Section	Page	Comment
95972(a)(9)	A-169	<p>To the requirements for Compliance Offset Protocols has been added the requirement that such protocols “consist of approved standardized methods.” The Notice of Public Availability document explains that “As discussed in the ISOR, this ensures a consistent implementation of all offset projects within a project type.”</p> <p>ACR strongly supports the objective of consistent implementation of all offset projects within a project type. However it is unclear what ARB means by “standardized methods,” which is open to subjective interpretation since this is not a term included in the list of definitions in §95802. We are concerned that this could unintentionally exclude some potential Compliance Offset Protocols that are judged not to meet an undefined requirement.</p> <p>If the intent of the “standardized methods” language is simply to signal that ARB will only approve one protocol per project type – to prevent project developers from bringing new protocols to ARB for review in a project type for which ARB has already approved a protocol – this could simply be stated.</p> <p>ACR recommends §95972(a)(9) be clarified. Any Compliance Offset Protocols ARB approves by definition will consist of ARB-approved methods, and ARB will have ample opportunity in reviewing and approving Compliance Offset Protocols to determine whether methods are standardized.</p> <p>§95972(a)(9) could be revised to read:</p> <p><u>“Consist of ARB-approved standardized methods. It is ARB’s intent to approve only one Compliance Offset Protocol per project type.”</u></p>
95985	A-242	<p>This section retains the “buyer liability” concept in which liability to replace invalidated ARB Offset Credits rests with the current holder of the credit or the entity that submitted the credit for compliance or retirement; or, in the event these entities are no longer in business, with the Offset Project Operator or Authorized Project Designee. We feel ARB’s addition of a statute of limitations and additional clarity on the potential triggers for invalidation will help bound the risk for all parties. Since eight years as a statute of limitations is still viewed by most as too long, ARB’s addition of language shortening this term to 5 years if the project is verified after 3 years by a different verifier, if cost effective, may provide a way for Offset Project</p>

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		<p>Operators or Authorized Project Designees to limit their invalidation risk to 5 years. We recognize all of these changes as useful improvements.</p> <p>However, ACR believes that significant problems remain in §95985. In the case that ARB is relying on the assumption that commercially available insurance will cover invalidation risk, five years may still be too long a horizon for insurance underwriters since there is no history on which to determine probability of occurrence of invalidations. It is a challenge even for experienced insurers to take on risk beyond three years, particularly in a new market.</p> <p>More broadly, the fact that replacement liability remains with the current holder of the ARB offset credit will likely pose obstacles to the development of a smoothly functioning offset market. ACR has not seen evidence that insurance products covering invalidation risk are commercially available or can necessarily be assumed to become available in the near-term. Even if insurance products are offered in the future, whether these will cover invalidation, will be available at competitive prices, and will adequately protect the market remains to be seen.</p> <p>Thus we feel that assigning replacement liability to the current holder of the credit or the entity that submitted the credit for compliance or retirement is fundamentally problematic. A “seller liability” approach, in which the replacement responsibility rests with the Offset Project Operator or Authorized Project Designee in the case of invalidation, more appropriately aligns the liability for invalidation with those who have the sectoral knowledge and ability to minimize the risk of invalidation. This would in effect require the sellers to stand by their product and to offer buyers some form of warranty that product is guaranteed valid until the offset is used for compliance or retired. ACR believes that market-based risk mitigation solutions are possible, either offered directly to Offset Project Operators or Authorized Project Designees, or offered via the Offset Project Registries, to cover invalidation risk. We will work with ARB to identify such solutions.</p> <p>In any case we expect invalidation will be a rare occurrence, considering ARB’s approval of rigorous offset protocols, use of accredited verifiers who are covered by errors and omissions insurance, and use of technically qualified Offset Project Registries to help review projects and administer the offset program.</p>

The following comments represent more minor changes that we believe would provide greater clarity in the regulation. ACR is happy to assist ARB in crafting language around these issues, if desired.

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95802(65)	A-13	<p>“Deforestation” is defined as “direct human-induced conversion of forested land to non-forested land.” Without a specified definition of “forest,” which is not provided in §95802, this definition is incomplete. There are multiple definitions of “forest,” both in the U.S. and internationally, usually focusing on thresholds for canopy cover, tree height, and minimum land area. There are, for example, the definition used by the United States under UNFCCC reporting requirements; U.N. Food and Agriculture Organization definitions used in periodic global and country-level inventories; the generalized definition used in the CDM program, which allows countries to select their own thresholds for canopy cover, tree height, and minimum land area; and others. Different definitions will have different implications for the types of deforestation (and afforestation/reforestation and improved forest management) project activities that will be included or excluded from eligibility, so it is important for ARB to be explicit in this regard in order to ensure that the chosen “forest” definition does not unintentionally exclude desired activities or conflict with UNFCCC reporting by the United States government.</p> <p><u>ACR recommends providing an approved definition of “forest.” If interested, Winrock and ACR would be happy to provide input in selecting or creating a definition. If ARB intends to rely on the “forest” definitions included in ARB-adopted forestry and REDD protocols, this could be mentioned in the “deforestation” definition.</u></p>
95802(186)	A-31	<p>The definition of “Permanent” requires that GHG reductions or removal enhancements are either not reversible, or that mechanisms are in place to replace any reversed GHG emission reductions or removal enhancements. ACR strongly agrees with this, and it is consistent with our own permanence requirements. However the definition goes on to require “that all credited reductions endure for a period that is comparable to the atmospheric lifetime of an anthropogenic CO₂ emission.” This definition is unclear, since no atmospheric lifetime is specified. No consensus exists, based on actual measured data, on the atmospheric lifetime of CO₂, but this is generally estimated at several hundred years. For example, see Lam, 2003, <i>Residence Time of Atmospheric CO₂</i>,¹ where Dr. Lam cites an effective CO₂ residence time of 400 years ±20%, based on the consensus of published Intergovernmental Panel on Climate Change (IPCC) models. However, the article also correctly points out that the only way to experimentally measure the residence time of CO₂ would be to take reliable data over many centuries, at a constant emission rate.</p>

¹ See <http://www.princeton.edu/~lam/TauL1b.pdf>.

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		<p>Since the <i>estimated</i> atmospheric lifetime of an anthropogenic CO₂ emission is far longer than any minimum offset project term currently being considered, we recommend that ARB delete that portion of the definition and focus on the issue important to the environmental integrity of ARB's cap-and-trade program, i.e. that that GHG reductions or removal enhancements are either not reversible, or that mechanisms are in place to replace any reversed GHG emission reductions or removal enhancements. The definition could be shortened to read:</p> <p><u><i>"Permanent" means, in the context of offset credits, either that GHG reductions or GHG removal enhancements are not reversible, or when GHG reductions or GHG removal enhancements may be reversible, that mechanisms are in place to replace any reversed GHG emission reductions or GHG removal enhancements to ensure that all credited reductions endure for a period that is comparable to the atmospheric lifetime of an anthropogenic CO₂ emission.</i></u></p>
95812(c)(3) and 95852(g)	A-50, A-86	<p>Carbon dioxide suppliers are effectively included "under the cap." In §95812, Inclusion Thresholds for Covered Entities, CO₂ captured from production processes or from a CO₂ stream to utilize for geologic sequestration is counted toward the applicability threshold of 25,000 metric tons per year. In §95852, Emission Categories Used to Calculate Compliance Obligations, a CO₂ supplier's compliance obligation is calculated as "the sum of CO₂ supplied for use in California or exported for the purposes of geologic sequestration, minus CO₂ verified to be geologically sequestered through use of a Board-approved carbon capture and geologic sequestration quantification methodology that ensures that the emission reductions are real, permanent, quantifiable, verifiable, and enforceable." This deducts permanently geologically sequestered CO₂ from the compliance obligation; but placing these entities under the cap means no compliance offsets from CCS will be possible.</p> <p>However, incentivizing voluntary CCS offsets could be a way to create real, additional, permanent, verifiable, and enforceable GHG reductions. If necessary ARB could restrict this opportunity to CCS projects located outside California. GHG reductions from carbon capture and permanent storage, quantified and verified using an ARB-approved Compliance Offset Protocol for this project type, could provide additional supply of high-quality offsets for compliance by covered entities.</p> <p><u><i>ACR recommends ARB consider removing CO₂ suppliers as a sector from having a compliance obligation and incentivizing CCS as offsets. Alternately, ARB could leave CO₂ suppliers under the cap in California, but allow CCS</i></u></p>

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		<u>projects located outside California to generate offsets under a new Compliance Offset Protocol.</u>
95972(a)(4)	A-169	<p>One of the requirements for Compliance Offset Protocols is that they account for activity-shifting leakage and market-shifting leakage for the offset project type. We agree this is crucial for projects with a risk of activity-shifting leakage and market-shifting leakage. However, some existing protocols simply prohibit (as an eligibility condition for use of the protocol) the conditions that pose a risk of leakage, and require the Offset Project Operator or Authorized Project Designee to demonstrate that these eligibility conditions are met. For example, ACR's Fertilizer Management protocol makes projects that increase fertilizer use outside the project boundary, or lead to decreases in yield, ineligible. As long as the Offset Project Operator or Authorized Project Designee can demonstrate to a verifier these conditions have been met, the risk of activity-shifting or market-shifting leakage exceeding <i>de minimis</i> levels is effectively eliminated.</p> <p>ACR recommends revising §95972(a)(4) to read:</p> <p><u>"Account for activity-shifting leakage and market-shifting leakage for the offset project type, unless the Compliance Offset Protocol stipulates eligibility conditions for use of the protocol that eliminate the risk of activity-shifting leakage and/or market-shifting leakage exceeding de minimis levels as defined in the protocol;"</u></p>
95973(a)(2)(C)	A-170	<p>This section specifies that GHG reductions or GHG removal enhancements resulting from the offset project exceed the project baseline as calculated using the Compliance Offset Protocol for that project type, and lists the four Compliance Offset Protocols thus far approved.</p> <p><u>Since ARB may in the future approve additional Compliance Offset Protocols, ACR suggests adding §95973(a)(2)(C)(5), "Reserved for additional Compliance Offset Protocols."</u></p>
95973(d) and 95975(l)	A-171, A-176	<p>ACR believes the language in these sections, regarding offset projects on Tribal lands, is in some respects inconsistent with federal Indian policy as established by the courts and Congress, and will likely exclude most if not all offset projects on Tribal lands. This is because:</p> <ul style="list-style-type: none"> • Tribes generally lack jurisdiction over lands owned by individual Indians and non-Indians within the borders of reservations, and thus are unable to grant a waiver of sovereign immunity; • Tribes in most states will not be willing, and/or do not have the legal authority, to consent to suit in California courts, per established

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		<p>Supreme Court decisions and Congressional acts;</p> <ul style="list-style-type: none"> There is currently no clear Department of Interior policy regarding federal approval of Tribes' participation in the cap-and-trade program. <p>However, we believe alternate language is possible in each case that achieves ARB's objective of enforceability of offset contracts on Tribal lands. ACR has submitted separate, detailed comments on this issue jointly with Van Ness Feldman, EcoAnalytics, and Finite Carbon Corporation. See "Native American Tribal Coalition ARB comments," submitted on August 10, 2011.</p>
95975(e)	A-174	<i>Similar to a comment above: since ARB may in the future approve additional Compliance Offset Protocols, ACR suggests adding §95975(e)(5), "Reserved for additional Compliance Offset Protocols."</i>
95976(d)	A-178	<i>Similar to a comment above: since ARB may in the future approve additional Compliance Offset Protocols, ACR suggests adding §95976(d)(5), "Reserved for additional Compliance Offset Protocols."</i>
95985(b)(1)	A-243	<p>Most offset protocols incorporate a concept of materiality, in part in consideration of the fact that unintentional errors, minor measurement errors, etc. may occur that do not materially affect the GHG assertion. We believe it is not ARB's intent to invalidate ARB Offset Credits in the case of immaterial errors. We thus recommend adding the word to §95985(b)(1):</p> <p><u>"ARB determines that information provided to ARB for an Offset Project Data Report or Offset Verification Statement by offset verifiers, verification bodies, Offset Project Operators, Authorized Project Designees, or Offset Project Registries related to an offset project was not materially true, accurate or complete;"</u></p>
95986	A-248	<p>ACR appreciates the addition of text in §95986(c)(2)(F) and §95986(d)(3) allowing Offset Project Registry applicants to designate a subdivision to provide registry services.</p> <p>We feel that technical expertise in protocol development and registry operations are crucial to effective provision of Offset Project Registry services and oversight of offset markets under the California cap-and-trade program. Both Winrock and ACR have over 15 years experience in delivering such services. As ARB knows, ACR's parent Winrock International has been engaged in building the foundations of the voluntary, pre-compliance and compliance carbon markets, both in California and around the world, since the mid-1990s. In California, Winrock has assessed carbon baselines and carbon sequestration potential for the California Energy Commission, CAL FIRE, California Climate Action Team, and ARB's AB 32 Scoping Plan process.</p>

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		<p>We participated in development of the original California Climate Action Registry forestry protocols and later the Climate Action Reserve protocol updates. We have published over 15 California Energy Commission – Public Interest Energy Research Program-sponsored publications on carbon baselines, supply potential, and project opportunities in the agriculture, forest and rangeland sectors in California. Beyond California, Winrock has authored carbon protocols for the Clean Development Mechanism (CDM), U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Department of Agriculture, USDA Forest Service, U.S. Agency for International Development, World Bank, International Tropical Timber Organization, United Nations organizations, Verified Carbon Standard (VCS), and others.</p> <p>Winrock conducts this work because it is part of our mission and core values, deriving from the Rockefeller family tradition, to apply strong science and economics to assist the poor and disadvantaged of the world. Winrock believes that climate change will have real and profound impacts on the poorest populations around the world, and that markets are the most effective path to mobilize action for the significant emission reductions necessary to avert the potentially catastrophic impacts of climate change on poor populations and the environments that sustain them. Therefore Winrock operates the American Carbon Registry to promote the development of effective market-based solutions to climate change and protect the integrity of nascent carbon markets.</p>
95987	A-253	<p>To ensure the integrity of all registry offset credits, provide proper oversight of the third-party verification process, identify and correct errors in offset project documentation, and minimize the risk of offset invalidations, we recommend that ARB approve only Offset Project Registries with significant technical expertise and years of experience conducting similar functions in the voluntary market. Registries such as ACR whose staff are actively engaged at every step of the protocol development and project registration process – overseeing an independent, transparent and science-based process for protocol approval, reviewing every offset project document prior to validation/verification, overseeing the work of independently accredited validation/verification bodies, and reviewing validation/verification reports prior to issuance of credits – are well qualified to perform similar tasks in assisting ARB to administer the offset program.</p>
95987(e)	A-255	<p>ACR appreciates the §95987(e) reduction of the audit requirement to 10% of annual offset verifications for projects registered on the Offset Project Registries. Combined with ARB’s own audits, we believe this number will be more manageable and sufficient to meet the objective.</p>

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		<p>We do have a concern that the requirement in §95987(e)(3), that the projects audited “provide a representative sampling of geographic locations of all offset projects, representative sampling of verification bodies, representative sampling of lead verifiers, representative sampling of offset project types, and representative sampling of offset projects by size,” may be difficult to achieve in the early years when there are relatively few projects.</p> <p><u>ACR recommends adding flexibility to this language in the event that, for example, the majority of the projects registered on a given Offset Project Registry happened to be clustered geographically, or by project type, or be mostly verified by the same body.</u></p>
95990(i)(1)	A-270	<p>Since ARB may in the future approve additional early action offset project protocols, as noted in the new §95990(c)(5)(E), a similar placeholder is warranted in this section to indicate that ARB will issue offset credits for early action offset credits generated under protocols approved in the future.</p> <p><u>ACR suggests adding §95990(i)(1)(F), “Reserved for additional early action offset project protocols approved under section 95990(c)(5).”</u></p>
95990(k)	A-273	<p><u>A similar placeholder could be inserted here, §95990(k)(1)(F), “Reserved for additional early action offset project protocols approved under section 95990(c)(5).”</u></p>