terrapass

restore the balance

December 9, 2010

Ms. Mary D. Nichols, Chairman
California Air Resources Board
Via web submission

RE: TerraPass comments regarding Early Action offset projects, supply, and additionality

Dear Chairman Nichols and Members of the Board:

TerraPass is a San Francisco-based company whose mission is to combat climate change by enabling consumers and businesses to understand and take responsibility for their greenhouse gas emissions. We do this in part by marketing voluntary emission reduction credits from offsite emission reduction projects to our customers.

TerraPass has the most projects listed on the Climate Action Reserve, and has had more projects issue credits than anyone else. We have served well over 350,000 individual and business customers, about 25% of whom live in California. Three years ago, TerraPass expanded its business to encompass what we hoped would be a large market for compliance-related offsets. As a result, we now count some of the world's largest financial institutions and multi-national corporations among our customers and partners.

As an early and very visible participant in the carbon offset marketplace, TerraPass has been at the forefront of this new commodity's successes and challenges. As individuals and as a company, we have been lauded and lambasted by the press, by the online community, and by both left- and right-leaning political forces. We have taken, head-on, all of the slings and arrows aimed at carbon offsets and responded by continually improving our communications, our transparency, and our standards of practice. We are a hands-on team with personal relationships, thousands and thousands of travel miles, and large hard disk full of raw data files and personal photos of every measurement device from every TerraPass project.

TerraPass works exclusively with US emission reduction projects, and has evaluated hundreds of candidate projects over the past five years. Our efforts have been to ensure that TerraPass customer purchases go to projects which were motivated by the ability to earn income from cutting carbon emissions, not from mandates nor even from altruistic actions. We do not believe there is a better-informed authority on the carbon offset lifecycle – from upfront financing to project design, from operations to verification, from sale to retirement – than TerraPass.

We offer the following comments with this background in mind:

1) **The regulation mistakenly sets aside its definition of additionality for a class of Early Action offset projects, thus enabling a non-trivial volume of non-additional credits into the cap and trade system**. By the regulation's own definition, no offsets should be available from projects which could reasonably be expected to have occurred without the financial incentives promised

by carbon offset revenue. Such projects were inspired by other driving forces; crediting regulated emitters for these reductions compromises the emissions cap in contradiction to legislated mandates.

2) **To the greatest extent possible *without breaching the emissions cap*, the regulation should enable and support a well-supplied, liquid offset marketplace from the program's outset in 2012.**

3) **A market that is well-supplied with credits which meet ARB's additionality standards can be achieved with relatively minor additions to the regulatory text:**

    a. Require that all Early Action offsets be additional to business-as-usual. This can be achieved by adding a simple additionality screen to projects with commencement dates earlier than January 1, 2007 so as to distinguish between Early Action credits which are additional and those which are not.

    b. To assure a sufficient early supply of offsets that meet all additionality criteria, include CRTs verified under the CAR Landfill Project Protocol as Early Action offsets, provided they derive from projects that meet all additionality tests.

Each of these points, including details of our recommended solution, is explained in the attachment. TerraPass will be submitting other comments of a more technical and detailed nature on a number of other points within the next week.

Thank you for your ongoing work on the critical issue of addressing climate change, and the opportunity to comment here.

Sincerely,

Erin Craig
Chief Executive Officer
TerraPass Inc.

Comments to Air Resources Board: Detailed Attachment

1) Additionality of Early Action offset projects, as proposed

Background. Within the cap and trade system, offsets represent an alternative means of achieving legislated emission reductions. They enable reductions to occur outside regulated sectors, and can be more cost effective than onsite reduction at regulated emission sources. However, if emission reductions which result from "business-as-usual" activities are allowed as emission offsets, the emissions cap could be exceeded and the legislated quantity of emission reductions will not be achieved.

To prevent this from happening, the regulation requires that offset credits be "additional" to the business-as-usual-scenario.[1] Business-as-usual is further defined as "*the set of conditions reasonably expected to occur within the project boundary in the absence of the financial incentives provided by offset credits*."[2]

Putting this language into practice, the draft regulation establishes January 1, 2007 as the commencement date for allowable ARB-issued offset projects. (See page III-10 of the ISOR: "*For the issuance of offset credits, ARB is proposing that offset projects which commence on or after January 1, 2007, be eligible. This date is the implementation date of AB 32 and provides for a better likelihood that the project was implemented to achieve AB 32 goals.*") The draft also proposes that the Board may allow earlier commencement dates for offset projects which are issued pursuant to non-ARB protocols or non-ARB standards in order to recognize "early actors" and provide an immediate supply of offsets to the initial market.[3] Even so, unless such offset credits are additional to the business-as-usual scenario, the legislated emission reduction levels cannot be assured.

Application of additionality standard to Early Action Offsets. The draft regulation proposes that ARB accept Early Action offset credits from three sets of CAR protocols that allow projects with startup dates as early as January 1, 2001 – and even earlier in the case of some forestry projects. In doing so, the ARB relies on CAR's assessment of additionality in the context of their protocol development work.[4] However, CAR's definition and application of additionality has changed over time, especially with respect to forestry projects; consequently, the additionality standard applied to these early action projects is internally inconsistent and generally inconsistent with the ARB's stated aims, as explained below.

According to the proposed ARB regulatory language, a project is additional if we cannot reasonably expect it to have occurred without financial incentives provided by carbon credits. By contrast, according to CAR's protocol for Conservation-Based Forest Management version 2.1, a project is additional if it can demonstrate that the project's carbon sequestration activities exceed the project baseline sequestration projection (which is generally defined as management per the Forest Practices Act and could be set backwards as early as 1990), without reference to commencement date, financial requirements or incentives.[5] Later versions of the CAR protocols establish a "no earlier than" date of January 1, 2001 in line with the creation of the California Climate Action Registry that same year.

[1] See October 29 Draft Regulation Order page A-6, definition of Additionality; and Section 95970
[2] See October 29 Draft Regulation Order page A-10
[3] See Initial Statement of Reasons, pages II-45 and III-10
[4] See Initial Statement of Reasons, page III-21
[5] See CAR Conservation-Based Forest Management Protocol, version 2.1, here, especially pages 19 and 24

However, no other filters are applied to ascertain whether projects with historic start dates were in fact influenced by carbon revenue.

In Fall 2009, CAR's Board of Directors recognized that the January 2001 start date criterion was problematic: *"Although the creation of CCAR may have signaled the prospects for participating in a carbon market in 2001, the notion that a developer might have started a truly "additional" project at that time and then waited for nearly nine years to apply for formal registration with the Reserve is increasingly difficult to accept*.[6]" The Board addressed this concern by adopting new rules and imposing supplementary additionality screens, but these were not applied retroactively to projects already listed.[7]

Based on TerraPass' detailed factual assessments of a great many offset projects commenced in the first half of this decade, we believe a disproportionate share of these early projects were developed with no reference to or influence from the prospect of carbon revenue, even if speculative or distant.

Countervailing Policies. We comprehend that there are countervailing policy aims that may contribute to a decision to set aside the regulation's additionality rules for these early action projects. First, it may be appropriate to provide special consideration for project owners who acted early and purposefully to mitigate climate change impacts even if they did not anticipate a financial benefit for doing so. Second, the ARB may be concerned about launching a new cap and trade system without the full complement of economic controls which a well-supplied offset market would provide.

Regarding special consideration, we hasten to point out the voluntary offset marketplace has been in place and active in the US for half-a-dozen years. Early actors have had the opportunity for financial reward throughout this period thanks to early protocol development by the California Climate Action Registry, the Chicago Climate Exchange, and others. Indeed some individual project owners have already received offset revenue and revenue commitments in the millions of dollars from their early actions. We believe it is reasonable to ask whether any *further* special consideration, as applied to non-additional projects in a regulatory context, is an appropriate public policy goal for the State of California.

That said, we believe that appropriate recognition can be given to early actors and sufficient supply achieved without sacrificing the emissions cap as described in (3) below.

2) The importance of a well-supplied offset marketplace

Offsets' primary purpose in the proposed cap and trade system is to enable regulated emitters to achieve the required emission reductions at a lower overall cost than would be possible if they were limited to reductions achievable within the regulated community itself. To provide this cost-control feature, there must be a sufficient number of qualifying, cost-effective emission reduction opportunities outside the regulated community to supply the emitters' demand or quota for offset credits. If offsets are scarce relative to demand, prices will be dictated by the demand signal and will not be connected to the underlying emission reduction costs, thus destroying the cost-control benefit.

The Initial Statement of Reasons includes an offset supply analysis for the time period from 2012 through 2020, but does not provide enough detail to assess whether the market will be fully supplied at each of the compliance surrender dates. While there is necessarily considerable guesswork in

[6] See Climate Action Reserve "Proposed New Policy Concerning the Earliest Eligible Start Date for Offset Projects," October 7, 2009, here.
[7] Ibid

estimating offset supply in the 2020 timeframe, there is considerably less guesswork in estimating supply in the first compliance period since it is so near at hand.

TerraPass has completed a bottom-up analysis of livestock methane offset availability, and made reasonable top –down estimates of forestry and ozone-depleting substance projects. Separately, carbon industry research organizations such as PointCarbon have published their own estimates. TerraPass estimates that approximately 20 million metric tons of offsets could be available by the end of 2014, while industry research estimates are closer to 27 million. Both of these figures are significantly less than a 39 million tons required to fully supply the market.

In addition, TerraPass believes that offsets created in calendar year 2014 cannot be relied upon for the large 2015 compliance submission. Vintage 2014 offsets will not be verified until late in the year of 2015, just before the compliance submission is due. Since offset projects carry many delivery risks, offset credit owners who make 2015 delivery commitments to emitters will likely limit those commitments to credits of vintage 2013 and earlier. This reduces the supply available for the 2015 submittal by several million tons.

There are many uncertainties and assumptions buried within these large estimates, and they could be very far off in either direction. Also, the buying behavior of emitters is difficult to predict. Even so, a well-supplied marketplace makes quite unnecessary any precise supply models or and sophisticated market behavior predictions. To the extent that a well-supplied marketplace can be achieved with real, additional emission reductions, the program's goals will be well-served.

3) Assuring real, additional offset supply in the near term

Fortunately, there are simple, well-known and effective ways to assure that Early Action offset projects which are allowed into the cap and trade system are, in fact, additional. With this in mind, there remains a large untapped source of Early Action projects which could fill the nearterm supply shortfalls without dampening the market for new offset projects.

Assuring additionality. TerraPass recommends that a simple additionality screen be required of all projects with commencement dates earlier than January 1, 2007 in order to better distinguish those which are additional from those which are not.

Specifically, we recommend that the ARB limit the maximum allowable length of time between:

- A project's commencement date (generally, this is the online date or the start of the emission reduction/sequestration activity); and
- The date upon which the project owner committed the project (in writing) to a carbon registry. Note, we are referring to a commitment to *any* carbon registry; though the Early Action credits will only come from one registry such as CAR, the project's initial commitment may have occurred many years earlier on a different registry.

In our experience, early project owners who were influenced by carbon revenue and/or by the pressing need to mitigate climate change are the very same early actors who pioneered the Chicago Climate Exchange and the California Climate Action Registry. Furthermore, these same people acted quickly and diligently to quantify and verify their activities so as to prove the promise of this new mitigation possibility.

Also, simple logic and common sense dictates that if a project would not have occurred but for carbon revenue, that the project owner would seek out such revenue within a reasonably short timeframe. This simple logic has proved powerful enough that many carbon standards now impose registration time limits on both historic and new projects as an additionality test.

Indeed, a "time limit screen" is precisely the technique adopted by the Climate Action Reserve Board in 2009 when it changed its eligibility rules so as to assure project additionality.[8] Similarly, the Voluntary Carbon Standards Association imposes a maximum time limit between project startup and third-party Validation – and has done, since 2007.[9]

ARB is fortunate to be able to take best practices from the experiences of voluntary registries. In this case, these time limit screens are a widely used and agreed-upon best practice. To forego this practice would be to take a significant and unnecessary step backward.

The time bounds of this screening tool (its endpoints) can be set using any number of dates in a project's lifecycle. The endpoints we recommend above are easily verifiable, and similar to endpoints used by CAR today.

It is important to remember, though, that for early projects these dates will be a reflection of both the intentions of the project owners, and the practical availability of a registry to engage with. Neither the California Climate Action Registry nor the Chicago Climate Exchange, for example, were available generally before 2004. For this reason, we recommend that the maximum time limit chosen for this screen be longer than that used by CAR and the VCS. While these two bodies use 24-month limits; we recommend a three-year limit for application to these Early Action projects.

We have applied this screen to many CAR projects for which we have done substantial supplemental, project-specific research, and believe it is extremely effective and produces very few errors. Additional projects pass the screen. Non-additional projects do not.

Assuring supply. As noted above, if offset supply falls short of demand, the fact that the few available offset projects are well-qualified and additional will be little consolation in comparison to the financial burden. As a result, the regulatory system as a whole may be endangered, putting pressure on the Board to ease the cap explicitly – exactly the situation we would all like to avoid.

Therefore we believe it is critical to ensure an adequate supply of offsets throughout the first compliance period, to the extent this can be done within the established emissions cap.

Therefore, we recommend that the ARB expand the Early Action offset protocols accepted to include the CAR Landfill Project Protocol as soon as can possibly be achieved. This recommendation has many policy benefits:

- **Landfill methane offset projects produce easily measurable and irreversible reductions**.

[8] See Climate Action Reserve "Proposed New Policy Concerning the Earliest Eligible Start Date for Offset Projects," October 7, 2009, here.
[9] See Voluntary Carbon Standard 2007, page 11, here.

- **The qualifying landfill methane offset projects are additional.** With the additionality tests CAR has already applied, plus the supplemental time-bound test described above, we can be confident that the landfill methane projects credited are not business-as-usual activities.
- **Landfill methane projects bring environmental and community co-benefits.**
- **Landfill methane offset projects are numerous**. One reason for this is that as a project type they represent a perfect example of an investment-ready opportunity. The capital investment for each project is relatively small, the required technology is well-known, and the asset (landfill) lends itself to third-party investor-operators since adding a methane control system does not fundamentally change landfill operations. Finally, unlike California, the US has a large population of small, rural and largely publicly-owned landfills for whom voluntary methane control does not represent a common practice. It is exactly for these reasons that nearly every voluntary offset program has adopted a landfill methane protocol.
- **Most of the landfill methane projects on the CAR registry are at publicly owned landfills**. This means that the benefits from the offset revenue will be well distributed, not concentrated under the auspices of a few corporations. Dispersed ownership also lessens any likelihood of offset market manipulation.

Based on data from the Climate Action Reserve, other public information, and individual conversations between TerraPass staff and many CAR landfill project owners, TerraPass estimates that after all additionality rules are applied, approximately **18 million metric tons of landfill methane credits could be available by the end of 2013**. Unlike some of the top-down estimates used by others, this is a project-by-project bottoms-up estimate of all qualifying projects.[10] Also, while TerraPass disagrees with applying California regulatory standards to out-of-state landfill methane projects, **in constructing this estimate we have nonetheless subtracted all credits that would not be additional to California's regulation.**

We do not believe the environmental review work required to support this recommendation is substantial. Landfill methane projects are straightforward from an environmental standpoint. Furthermore, CAR's protocols are based on numerous earlier landfill methane protocols that had been in use for some time, so both the science and the calculations have been well-vetted.

In short, we see substantial benefit to including the CAR landfill methane protocols and no downside from a policy standpoint. We believe a fast-track process, such as one parallel to the final adoption of the cap and trade regulation, would do much to ensure the launch of a regulatory system in 2012 which is both environmentally and economically sound.

[10] TerraPass has shared our estimation method with ARB staff and will provide it in summary form in a later technical memorandum.