



July 5, 2018

Rajinder Sahota, Asst. Division Chief
Industrial Strategies Division
California Air Resources Board (CARB)
1001 I Street
Sacramento, CA 95814

RE: Presentation at June 21, 2018 workshop and version two of Preliminary Discussion Draft of Potential Changes to the Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms

Dear Ms. Sahota:

The American Carbon Registry (ACR), a CARB-approved Offset Project Registry (OPR) for the California cap-and-trade program, welcomes the opportunity to offer comments in relation to the June 21, 2018 workshop and version two of CARB's Preliminary Discussion Draft of Potential Changes to the Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms. Amid the debate around offsets, we wish to ensure that the intent of AB 398 is accurately translated into regulation, consistent with the exact statutory language and recent comments by the bill author, Assemblyman Eduardo Garcia.

All projects in California should automatically qualify as providing Direct Environmental Benefits in-State (DEBS).

Projects in-state comport with any proposed interpretation of DEBS. That in-state livestock digester and forestry projects exhibit DEBS is not in dispute. Conventional air pollutants, as well as surface and groundwater contamination, are avoided or reduced. Perhaps less clear, though no less real, are the DEBS associated with destruction of ozone depleting substances (ODS).

By destroying ODS, damage to the ozone layer is avoided. Skin cancer risk is reduced. With respect to air pollution, AB 398 defines DEBS as "the reduction or avoidance of emissions of any air pollutant in the state." Like greenhouse gases (GHGs), ODS endanger public health and welfare and are, thus, air pollutants. Offset projects that collect ODS in California inherently avoid the release of these air pollutants in the state. Avoided ODS emissions, therefore, fall squarely within the definition of DEBS.

Some stakeholders have opined that the benefit of a protected ozone layer is insufficiently "direct." Fortunately, legislators have already made clear the meaning of DEBS in entirety. Specific interpretations of "direct" redefine DEBS itself. Attempts to redefine DEBS should rightfully be disregarded in favor of the statutory definition.

Furthermore, the Compliance Offset Protocol for ODS Projects includes CFC-13. By science and regulation, CFC-13 is a volatile organic compound (VOC). CFC-13 is not among the VOCs that U.S. EPA exempts from

regulation due to negligible photochemical reactivity. Emissions of CFC-13 are deemed to contribute to ground-level ozone formation, a health hazard with which millions of Californians are all too familiar.

Offset projects result in uncredited GHG reductions.

Projects can reduce GHGs outside of the protocol.

Projects are not given credit for reducing GHGs beyond the scope of the applicable protocol. For example, the metered methane destruction at livestock digesters is almost always higher than the modeled value. In such cases, the modeled figure is used, as it accounts only for methane from manure and only for that amount of methane conservatively expected from manure. One reason for higher methane destruction could be that off-site commercial wastes have been added. The project does not receive offsets for this contribution to mitigating climate change.

GHGs within scope of a given protocol can be under-credited.

- 1) Certain projects are given credit for fewer emissions reductions than metering or models indicate, even when the reductions are within the applicable protocol. In the livestock digester example above, changes to feed could elevate the methane from manure, but crediting is limited to that the model allows. In the case of methane destruction at abandoned mines, uncertainty deductions substantially reduce offsets for mines that did not utilize a drainage system while active. Of the methane destruction values metered or modeled (using default hyperbolic decline curve emission rate coefficients), the lower number is used, and then a further 20% deduction is applied. In all likelihood, the result is significant under-crediting.
- 2) The global warming potential (GWP) values used to calculate the emissions reductions achieved by offset projects are low. Under current CARB regulations, offset issuances are based on the GWPs of the Intergovernmental Panel on Climate Change (IPCC) second assessment report (AR2). The most recent science indicates that AR2 GWPs understate the emissions reductions being achieved. From 2021, the GWPs from the IPCC fourth assessment report (AR4) will be used, but the GWPs will still be lower than current scientific consensus. To illustrate, the IPCC fifth assessment report (AR5) indicates a 100-year GWP for methane that is 12% higher than that of AR4 and 33.3% higher than that of AR2. The regulatory process inevitably lags the science. The consistent result is that offsets reflect fewer emissions reductions than are actually realized.

Use of 100-year GWPs for offset projects that reduce short-lived climate pollutants (SLCPs) understates the climate benefits.

For consistency across protocols, use of a 100-year GWP is an understandable accounting convention. However, the amplified near-term impact of SLCPs indicates that 20 years is a more meaningful time frame. CARB's SLCP strategy affirms this perspective with its use of 20-year GWPs. Under AR5, the 20-year GWP for methane is 84, triple the 100-year GWP of 28. For refrigerant CFC-11, the 100-year GWP is 4,660, compared to 6,900 over 20 years. For CFC-12, the difference is less dramatic but still material: a 100-year GWP of 10,200 versus a 20-year GWP of 10,800. (Similar divergences are found in AR2 which, as noted above, is currently used to quantify offsets.) Offset projects that destroy methane and ODS are delivering climate benefits that far outstrip the credits given.

GHG reductions anywhere provide DEBS.

At the May 23, 2018 hearing of the Joint Legislative Committee on Climate Change Policy, the author of AB 398, Assemblyman Eduardo Garcia, expounded on the intent of the DEBS provision: "...The thought has been how do we ensure that we're addressing the local problems: clean air, clean water....It was drafted and crafted specifically this way to meet the restrictions or limitations of the law, that could

allow us to meet these overall objectives....[Direct environmental benefits] was the appropriate approach, and as the author of the bill I wanted to let you know that that's what we *meant* and nothing beyond that..."

Assemblyman Garcia's comments can be understood to support our view that the intent of the law was to direct CARB to provide assurance of DEBS, not to restrict GHGs reductions from qualifying as DEBS and certainly not to limit projects to those in California. No bright line was drawn at the borders of California. The DEBS approach was taken as a legitimate alternative, not as a differently worded in-state requirement or a preference for one path to healthy air and water over another.

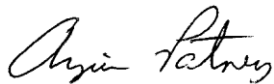
Assemblyman Garcia highlighted local air and water quality concerns. The detrimental role of GHGs in air and water quality is established science.

GHGs cause higher temperatures, increasing ground level ozone formation and its concomitant respiratory health effects. As a secondary pollutant, some might claim ground-level ozone is not an "emissions" reduction or avoidance covered by the DEBS definition. Such a distinction is not only meaningless but legally risky. By improving local air quality, the intent of AB 398 is met. To assert that this air quality improvement doesn't qualify as DEBS because the ozone was formed, rather than emitted, in-state raises serious Constitutional issues around interstate commerce. That would be to disqualify the desired result only because it was generated by investment outside state borders.

For water impacts, AB 398 defines DEBS as "...reduction or avoidance of any pollutant that could have an adverse impact on waters of the state." GHGs are pollutants that adversely impact waters of the state. For example, diminished surface and ground water concentrate pollutant loads. Reducing or avoiding GHGs anywhere delivers DEBS. The GHG-water linkage is well supported by the science and is recognized in State policy and plans. ACR elaborated on this extensively in our comment letter dated March 16, 2018.

We appreciate the opportunity to provide these comments, and we look forward to continued engagement as the process moves forward. If you would like to further discuss our thoughts, please feel free to get in touch.

Respectfully,



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