

May 16, 2010

Mr. Max Dubuisson
Climate Action Reserve
523 W. 6th Street, Suite 428
Los Angeles, CA 90014

Subject: Comments Regarding Draft Landfill Project Protocol, Version 4.0, May 2011

Dear Mr. Dubuisson:

Thank you for the opportunity to provide comments on the Draft Landfill Project Protocol, Version 4.0 (May 2010 Version).

As someone has been actively involved in the landfill gas to energy business for over 30 years our perspective and our comments regarding Version 4 are based on actual projects and prospective projects that we are interested in developing. The primary purpose of our comments is to present to the Climate Action Reserve our perspective of the potential impact of the Landfill Project Protocol proposed version 3 to 4 revisions.

An assumption that we make is that the primary emphasis of the Climate Action Reserve is the prevention of excessive releases of gases that have a deleterious effect on the atmosphere. The proposed protocol, as well as other protocols, is meant to encourage the implementation of projects that reduce such emissions through a revenue generation mechanism. Also, there is a legitimate concern that only those projects that would not have been developed otherwise benefit from the potential revenue. Specifically, the driver for the changes in Version 4.0 is to eliminate from the Reserve those projects that would proceed without incentives from GHG offset revenues. However, our view is that as proposed the protocol will also eliminate many projects that would proceed if they were qualified for the Reserve.

There are multiple issues and assumptions within the discussion section of the protocol with which we would take exception, however, we only want to focus on the major elements that we feel detrimental to the primary objective of creating projects that reduce GHG emissions. The intent to create a prescriptive methodology for qualifying projects as financially additional is a worthy target since the test of other organizations, such as the Voluntary Carbon Standard, for financial additionality is cumbersome and not definitive. Yet, each project is unique and the financial considerations are important.

We have tried to develop some small projects that would have required a reasonable revenue stream from the GHG offset revenue and a rate for bundled green energy equal to the retail rate charged by the local utility. The utility would not pay that rate because it was above "market rates" for bundled renewable energy. We can verify that since we are also developing a small but larger project that we bid into and received the market rate. That project does not need the GHG offset revenue. There are

small landfills that require both the GHG offset revenue and the bundled green energy revenue to be economically viable – and these are usually socially attractive.

The assumption that because a project receives both energy and renewable energy credits (REC) either independently or bundled it is a solid stand alone investment is not correct. There is no national standard for renewable energy that would create a nation wide market with transparent pricing and an ability to trade these assets. The value of the REC varies considerably by region and individual states. There are projects that cannot go forward based on the energy and REC sale alone but might be viable with the GHG offset revenue as well.

The Tons- In-Place (TIP) criteria is, from our perspective, too low. As a developer the TIP for a specific landfill is one of the evaluation elements when looking at potential projects. One must also consider the age of the waste, the location, whether open or closed, and other aspects of the waste and the landfill. A landfill that closed in 1985 with 10,000,000 TIP might actually be releasing more landfill gas into the atmosphere than a site still open of 700,000 TIP. Neither may be a candidate for an energy project but the smaller site would be eligible for the CAR. This difference would not meet an objective of minimizing GHG emissions. The proposed size threshold is too low. Note that both example landfills presented below are located in arid areas and have waste in place (WIP) in excess of the proposed 2.17 MMT threshold. Yet neither example landfill has a collection system nor plans to have a collection system in the future. While it is true that there is an economy of scale associated with LFGE projects, the Reserve has significantly missed the mark regarding what size landfill can economically be developed without GHG incentives. If the proposed size threshold remains in the landfill protocol small landfill projects will not be developed.

Example Landfill #1
City of Casa Grande Landfill
106 acre footprint
2.21 MMT of waste in place
In operation from November 8, 1987 to present
NMOC emission rate of 16.97 mega grams per year (Mg/yr) per 2010 Tier II Analysis

Example Landfill #2
Pima County Tangerine Landfill
88 acre footprint
3.07 MMT of waste in place
In operation from June 1984 to present
NMOC emission rate of 25 mega grams per year (Mg/yr) per 2007 Tier II Analysis

An advantage that a developer of landfill gas to energy projects has with larger NSPS sites is that the landfill owner is required to install the gas collection system and has included that expense in the capital cost of the landfill and is paid by the revenue for accepting waste at the site. This reduces the capital cost on the energy facility for these projects. The smaller sites that do not require a gas collection system to be installed for regulatory reasons would need to have one installed if an energy project were to be considered. Eliminating energy projects, with or without the REC revenue, from receiving GHG offset revenue would mean that many of the smaller projects that might have been constructed would not happen.

In summary, we believe that (1) the minimum threshold for TIP should be raised for both arid

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and especially the non-arid regions and that it should only apply to waste that is in place for less than 10 years and (2) reconsider the prohibition of a project receiving both RECs and GHG offset revenue either through an exception with a financial test or in combination with the size cutoffs.

Thank you for the opportunity to provide these comments for your consideration. Please contact me if you have questions.

Sincerely,

Michael J. Carolan

Carolan Associates