WASTE MANAGEMENT

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January 9, 2007

California Energy Commission
Docket Unit
Attn: Docket No. 06-OIR-1
1516 Ninth Street, MS-4
Sacramento, California 95814-5512

Subject: Staff Proposed Regulations for Implementing the Greenhouse Gases Emission Performance Standard for Local Publicly Owned Utilities

Dear Sirs and Madams:

Thank you for the opportunity to provide written comments to the Energy Commission regarding staff proposed regulations for implementing the greenhouse gases emission performance standards for local publicly owned utilities as recently mandated by SB 1368. Waste Management provides comprehensive solid waste management services throughout California including the collection, processing, recycling and disposal of solid waste.

Waste Management is carefully evaluating the opportunities for the conversion of solid waste to energy in California consistent with state programs and policies. Currently Waste Management owns and operates numerous landfill gas to energy projects in California. We have also been evaluating the feasibility of the conversion of solid waste to energy through various conversion technology processes such as anaerobic digestion and cellulosic ethanol production. The feed-stocks for these processes could include a wide variety of biogenic (biologically derived) components of the waste stream such as urban wood waste, green waste, yard trimmings, paper, food wastes, etc. Virtually all greenhouse gas protocols recognize the carbon neutrality of generating energy from biogenic sources instead of anthropogenic fossil fuel sources (see Attachment A).

Waste Management strongly supports the inclusion of the combustion of landfill and digester gas as a biomass fuel. Landfill and digester methane gas is derived from biogenic materials (green wastes, paper, food wastes, etc.). If that methane is discharged to the atmosphere, most greenhouse gas protocols view the human activity of anaerobic landfilling or digestion as an anthropogenic source of methane emissions. However, if the methane is collected and combusted to form CO2, the emissions are once again "biogenic" in nature. For processes with CO2 emissions (not methane!), if the emissions are from biogenic materials and the materials are grown on a sustainable basis, then those emissions are considered simply to close the loop in the

natural carbon cycle. They return to the atmosphere CO2 that was originally removed by photosynthesis.

Our principle concern in writing to you today in preparation for the upcoming workshops is related to the language of proposed Section 2905 that appears to us to be unnecessarily limiting in defining "biomass fuels". A strict reading of this section would appear to only include "agricultural and wood wastes and digester and landfill gases . . ." We believe a somewhat broader definition to include the full range of biogenic wastes (green waste, food wastes, and other biologically produced materials that become waste) would be much more inclusive and appropriate. For example, we recommend changing the language of proposed Section 2905 to something along the lines of the following:

> **§2905 Biomass, Biogas or Landfill Gas Energy Facilities**
>
> (a) Facilities using biomass, biogas, or landfill gas as fuel(s) are determined to be compliant with the EPS. Biomass fuels are agricultural ***wastes, green wastes, food wastes, and*** ~~and~~ wood wastes, ~~***and digester and landfill gases, and any other biogenic material (biologically produced material) that is used as a fuel or produces a fuel***~~ that would otherwise be disposed of utilizing open burning, forest accumulation, landfill, flaring, spreading, or composting.
>
> (b) Non RPS-eligible facilities that use biomass, biogas or landfill gas in combination with other fuel(s) shall determine compliance with the EPS by calculating carbon dioxide emissions from the fuels other than other biomass, biogas or landfill gas.

The above-suggested changes include the use of the term "biogenic" that may need to be defined elsewhere in the regulation. Inclusion of a broader term such as "biogenic" is necessary to ensure eligibility of all facilities that use biologically derived materials to produce energy. By biogenic we mean produced by living organisms or biological processes within a proximate time frame -- not including fossil fuels.

Please contact me if you have any questions regarding our comments and concerns expressed in this letter.

Sincerely,

Charles A. White, P.E.
Director of Regulatory Affairs
Waste Management/West

Attachment

cc: Susan Brown, Advisor, California Energy Commission
Gary Collard, Energy Commission
Howard Levenson, CIWMB
Scott Walker, CIWMB

Attachment A

SOLID WASTE MANAGEMENT AND GREENHOUSE GASES
A Life-Cycle Assessment of Emissions and Sinks
2nd EDITION

EPA530-R-02-006, May 2002

Excerpt from page 12: CO2 Emissions from Biogenic Sources

The United States and all other parties to the U.N. Framework Convention on Climate Change (UNFCCC) agreed to develop inventories of GHGs for purposes of (1) developing mitigation strategies and (2) monitoring the progress of those strategies. The Intergovernmental Panel on Climate Change (IPCC) developed a set of inventory methods to be used as the international standard. (IPCC 1997. *IPCC Guidelines for National Greenhouse Gas Inventories*, three volumes.) The methodologies used in this report to evaluate emissions and sinks of GHGs are consistent with the IPCC guidance.

One of the elements of the IPCC guidance that deserves special mention is the approach used to address CO2 emissions from biogenic sources. For many countries, the treatment of CO2 releases from biogenic sources is most important when addressing releases from energy derived from biomass (e.g., burning wood), but this element is also important when evaluating waste management emissions (for example, the decomposition or combustion of grass clippings or paper). The carbon in paper and grass trimmings was originally removed from the atmosphere by photosynthesis, and under natural conditions, it would cycle back to the atmosphere eventually as CO2 due to degradation processes. The quantity of carbon that these natural processes cycle through the Earth's atmosphere, waters, soils, and biota is much greater than the quantity added by anthropogenic GHG sources. But the focus of the UNFCCC is on anthropogenic emissions—those resulting from human activities and subject to human control. Those emissions have the potential to alter the climate by disrupting the natural balances in carbon's biogeochemical cycle and altering the atmosphere's heat-trapping ability. For processes with CO2 emissions, if the emissions are from biogenic materials and the materials are grown on a sustainable basis, then those emissions are considered simply to close the loop in the natural carbon cycle. They return to the atmosphere CO2 that was originally removed by photosynthesis. In this case, the CO2 emissions are *not* counted. (For purposes of this analysis, biogenic materials are paper, yard trimmings, and food discards.) On the other hand, CO2 emissions from burning fossil fuels *are* counted because these emissions would not enter the cycle were it not for human activity. Likewise, CH4 emissions from landfills *are* counted. Even though the source of carbon is primarily biogenic, CH4 would not be emitted were it not for the human activity of landfilling the waste, which creates anaerobic conditions conducive to CH4 formation. Note that this approach does not distinguish between the timing of CO2 emissions, provided that they occur in a reasonably short time scale relative to the speed of the processes that affect global climate change. In other words, as long as the biogenic carbon would eventually be released as CO2, it does not matter whether it is released virtually instantaneously (e.g., from combustion) or over a period of a few decades (e.g., decomposition on the forest floor).