California Refuse Recycling Council

JOINT STATE OFFICE

September 9, 2009

Gary Gero
President
California Climate Action Registry
523 W. Sixth Street, Suite 428
Los Angeles, CA 90014

Sent by email through the Organic Waste Digestion Web site

Re: Organic Waste Diversion Draft Protocol

Dear Mr. Gero:

The California Refuse Recycling Council (CRRC) is a statewide non-profit trade association comprised of over 120 companies involved in the collection and processing of organic and waste wood products that also operate approximately 20 composting facilities, 50 material recovery facilities (MRFs), 25 construction and demolition (C&D) debris processing facilities, and over 12 landfills statewide. Our industry, in partnership with local government, has been instrumental in our state's efforts to attain the recycling mandate of 50% waste diversion from landfills, required by the California Integrated Waste Management Act of 1989 (AB 939), and will remain critical to the attainment of future sustainable goals.

The purpose of this correspondence is to provide comments on the Organic Waste Diversion (OWD) Draft Project Protocol.

Ownership of Indirect Emissions Reductions

The term "waste providing entity", needs to better-defined, and the associated language made more amenable to the kinds of relationships existing in the solid waste industry.

A common scenario could be one where a company collecting waste invests in an anaerobic digestion project and begins a food waste collection program. It probably isn't the intention of the OWD protocol for the collection company to have agreements with individual restaurants, grocery stores or neighborhoods where organic waste is generated and potentially separated for collection, and this would be onerous. It might be helpful to explain the contractual relationships contemplated by referencing the schematic in Figure 4.1.

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Pre-Project Composting Activities

Considerable time can be required to develop an effective food waste diversion program and to site, construct and begin operation of an anaerobic digester. At the same time, it would be advantageous to have a financially viable food waste feedstock stream available when the anaerobic digestion facility begins operation. For this reason, it would be prudent to initiate the food waste diversion program during project development for the anaerobic digester. In this case, there would be a segregated food waste stream during the interim period after the food waste separation program has started and before the anaerobic digester is operational. A private company or governmental entity in this situation may want to use a compost facility with excess capacity to manage the food waste during this interim period. The language on Page 25 would be problematic for this type of approach. Language should be used that allows increases in food waste to a composting facility if they are attributable to the start up activities for the OWD project.

Local Mandate and Operational Start Date

For a project to be additional, the OWD Protocol requires that:

"The OWD project digesting the food waste stream has an operational start date prior to or no more than 12 months following the passage into law of the local food waste diversion mandate."

The development of in-vessel anaerobic digestion of food waste may occur by first taking advantage of excess capacity at waste water treatment facilities before construction of stand-alone anaerobic digestion facilities. A local jurisdiction may enact a mandate to support the diversion of food waste to an underutilized anaerobic digester located at a waste water treat plant. As the waste water flows and/or food waste supply increase and excess digester capacity decreases it may be necessary to site an independent facility. This could occur after the mandate has been in place for over 12 months.

Constructing a waste processing facility is a long-term endeavor with multiple uncertainties related to the permitting process and other issues inherent to large construction projects. Several years from project initiation to beginning operations is a realistic expectation.

The CRRC, for the reasons described above, supports the fifth option in the Climate Action Reserve's paper requesting feedback on this topic. Local mandates should not fall within the regulatory test for additionality. The requirement to comply with State-level waste diversion requirements, such as California's Assembly Bill 939, before a project is considered additional is already included in the draft protocol.

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Upfront Crediting vs. Distributing Annually

In the case of food waste, upfront crediting presents very little risk that the emissions reductions anticipated would not occur. The CRRC supports upfront crediting for the reasons cited in the Reserve's document.

Thank you for the opportunity to provide comments and participate in this public process.

Should you have any questions, please contact me at (916) 739-1200.

Sincerely,

Evan W.R. Edgar
For the California Refuse Recycling Council

Evan Edgar for:
George Eowan
For the California Refuse Recycling Council

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California Refuse Recycling Council

JOINT STATE OFFICE

September 9, 2009

Syd Partridge
Policy Manager
Climate Action Reserve
523 W. Sixth Street, Suite 428
Los Angeles, CA 90014

Sent by email through the Organic Waste Digestion Web site

Re: Organic Waste Digestion Draft Protocol

Dear Mr. Partridge:

The California Refuse Recycling Council (CRRC) is a statewide non-profit trade association comprised of over 120 companies involved in the collection and processing of organic and waste wood products that also operate approximately 20 compositing facilities, 50 material recovery facilities (MRFs), 25 construction and demolition debris processing facilities, and over 12 landfills statewide. Our industry, in partnership with local government, has been instrumental in our state's efforts to attain the recycling mandate of 50% waste diversion from landfills, required by the California Integrated Waste Management Act of 1989 (AB 939), and will remain critical to the attainment of future sustainable goals.

The purpose of this correspondence is to provide comments on the Organic Waste Digestion (OWD) draft project report, which are presented below.

Comment: Equation 5.4 – DOCf

Equation 5.4, which is the IPCC approved FOD equation, contains a parameter called DOCf.

The OWD Protocol defines DOCf as: "*The degradable organic carbon that can decompose under ideal conditions. A value of 0.5 shall be used*." The OWD Protocol references the Clean Development Mechanism Methodology, which is; *CDM Annex 10 – Tool to determine methane emissions avoided from dumping waste at a SWDS (V4.0).*

However, the referenced CDM methodology defines the parameter DOCf slightly differently than the OWD Protocol. The CDM defines DOCf as: "*Fraction of degradable organic carbon (DOC) that can decompose*", and the 2006 IPCC

Guidelines for National Greenhouse Gas Inventories, on which the CDM methodology is based, further defines DOCf as:

"*the fraction of the degradable organic carbon that decomposes under anaerobic conditions (DOCf*)".

Use of the term "under ideal conditions" in the OWD Protocol may be confusing as it can be interpreted differently than intended here, and the definition in the IPCC Guidelines is more precise. This leads to a discussion of the default value provided for DOCf in the OWD Protocol of 0.5, which is also from the CDM document referenced above and the IPCC Guidelines.

The IPCC Guidelines further state:

"Higher tier methodologies (Tier 2 or 3) can also use separate DOCf values defined for specific waste types. There is some literature giving information about anaerobic degradability (DOCf) for material types (Barlaz, 2004; Micales & Skog, 1997; US EPA, 2002; Gardner et al., 2002). The reported degradabilities especially for wood, vary over a wide range and are yet quite inconclusive. They may also vary with tree species. Separate DOCf values for specific waste types imply the assumption that degradation of different types of waste is independent of each other. As discussed further, below under Half-Life, scientific knowledge at the moment of writing these Guidelines is not yet conclusive on this aspect. Hence the use of waste type specific values for DOCf can introduce additional uncertainty to the estimates in cases where the data on waste composition are based on default values, modelling or estimates based on expert judgment. Therefore, it is good practice to use DOCf values specific to waste types only when waste composition data are based on representative sampling and analyses.

Since the OWD Protocol is specific to food waste (as regards eligible MSW), and the OWD Protocol discusses waste characterization requirements when food waste is a component of the material processed, it seems appropriate to use food waste-specific parameters to the extent warranted. The US EPA WARM model includes estimates of landfill carbon storage based on Dr. Barlaz' studies, which are presented in *Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks", (September 2006, EPA530-R-06-004)*. Exhibits 6-2, 6.3 and 6.4 of the EPA document provide information relevant to the decomposition of food waste in landfills and the parameter DOCf. As can be seen in the exhibits, food waste decomposes to a much larger extent under anaerobic conditions than other waste types. It can be seen in Exhibit 6.2 (US EPA) that 16% of food waste carbon is stored in the landfill, compared to 55% for cardboard, 85% for newsprint and 52% for mixed municipal solid waste, which is consistent with the default value provided by the IPCC.

The latest version of the WARM model that is available on-line uses updated versions of the values shown in the cited EPA exhibits that are based on more recent studies, but the relative amounts of anaerobic decomposition remain generally the same. Based on the data provided in the WARM documentation, using the 0.5 default value for DOCf, which was intended by the IPCC to represent mixed MSW, not food waste, underestimates landfill emissions from food waste by about 35%. There is currently enough scientific knowledge about this parameter to provide a more specific default value.

Thank-you for the opportunity to provide comments and participate in this public process.

Sincerely,

RICK MOORE, P.E.
EDGAR & ASSOCIATES, INC
FOR THE CALIFORNIA REFUSE RECYCLING COUNCIL