July 18, 2008

California Air Resources Board
California Climate Action Registry
ICLEI
The Climate Registry

Thank you for the opportunity to comment on the Local Government Operation Protocol. Our comments below relate to Chapter 9, Solid Waste Facilities.

Our comments below respond to the proposed methane recovery rate, application of the partial landfill gas collection methodology, and the proposed scope issues, as well as input on including waste emissions (methane) in all local government inventories not just for those that own/operate a landfill.

Chapter 9.3.2 pg 91 (step 3) and 9.3.3 pg 92 (step 4)

1. **A 60% methane recovery rate is a more appropriate default methane recovery rate to use than 75%** in the absence of a good methodology to determine fugitive emissions and the wide variability in output achieved in running the IPCC FOD model minus actual methane recovery statistics.

   A 60% recovery rate is a more appropriate average than 75% in this context. While the EPA recommends using a collection efficiency of 60% to 85% in the AP 42 guidelines, methane poses such a significant climate impact that more conservative estimates should be applied. Furthermore, studies have shown that certain types of waste, e.g., food, can release most of their methane prior to capture systems being in place. Until there is a better system for determining how much methane is lost through lateral cracks, leaks in the wells and piping, and prior to and after the active phase of the methane collection system, the standard capture efficiency number should be at the more conservative lower end of the range of EPA's AP 42 guidelines, which is 60%.

Chapter 9.3.2 pg 90 and 9.3.3 pg 91

2. With respect to the proposed partial vs. comprehensive gas recovery system, **all landfills that are open should be considered partial with only closed landfills considered comprehensive**. The rationale for this is that, in many large landfills, the open working face without methane recovery will be less than the 25% criteria given for “partial” gas recovery systems. Under the proposed criteria, it may be that no open working landfills will be considered “partial.” This eliminates the value of the partial methodology, which is to capture the emissions from the part of the landfill that is uncovered in the base year, an emission value which is greater than for those parts of the landfill undergoing gas extraction.

Chapter 9 pg 84 et. al. and 12.2.1 pg 108

3. **The Local Government Operation's Protocol (LGOP) should recommend that methane emissions generated from waste disposed of as a result of local government operations be included and reported in all local government inventories.** This differs from the LGOP's recommendation to only include waste sector emissions in the local government inventory if the government owns/operates the landfill. Currently, the proposed protocol recommends only including aggregated methane emissions from an entire landfill (including waste from both the community and local government), and only for local governments that own or operate their own landfill.

   It is more appropriate to include this emissions source in all local government inventories to acknowledge the impact of waste generation on climate change and to send the appropriate policy signals to local governments working to reduce their waste and emissions levels.

   Due to local government time and resource constraints, waste generation/disposal emissions will only be included in a local government inventory if "required" by the protocol. Moreover, since policy makers focus on emission reductions based on baseline emissions, generally only items that are measured will be acted upon. Therefore, "requiring" reporting on waste generation/disposal emissions will:

   - Recognize that the inclusion of emissions from waste generation has been considered "best practice" in local government GHG accounting for the last 17 years and is a standard emissions source in the hundreds of local government inventories completed to date.
   - Ensure a complete accounting of all emissions sources from local government operations (and that these emissions are not overshadowed by the community's waste emissions in cases where the local government does operate their landfill.)
   - Account for the important impact that a local government can have in reducing their GHG emissions through internal waste prevention, diversion and reduction policies.

12.2.2 pg 108 (for inclusion in Chapter 9 pg 84 et.al.)

4. **Emissions from waste generation and disposal within local government operations should be classified as Scope 2 emissions and treated in the same manner as electricity consumption.**

   We recognize that this is a departure from the precedent set by WRI/WBCSD's definition of Scope 2 emissions, but it would significantly improve the validity of the protocol because:

   - As with emissions generated from electricity use, waste sector emissions are generated elsewhere (at easily identifiable sites) as a direct result of decisions (i.e. purchasing, efficiency, operating practices, etc.) made by the local government.

- Emissions from waste generation/disposal fall under both the direct operational and financial control of the local government (via waste franchise contracts that contain waste diversion requirements and recycling programs and policies) and therefore are more accurately accounted for as scope 2 than scope 3 emissions, which are outside of the government's "control" and can only be "influenced" by the government.
- The amount of waste generated is primarily influenced by the local government's actions, regardless of whether the landfill is municipally owned or operated.
- The scopes concept is only an accounting convention, not a legally binding definition; local governments are inherently different types of organizations than the businesses that the WRI/WBCD framework was designed for. In many ways this Protocol builds on the WRI/WBCD framework, however it should not be unduly limited by that incongruent context.

12.2.2 pg 108

5. If waste disposal emissions cannot be classified as Scope 2, at a minimum, it should be made a required Scope 3 element for reporting purposes under the Protocol.

12.2.2 pg 108 (for inclusion in Chapter 9 pg 84 et.al.)

6. Use the equations embedded in the EPA's warm model as the most appropriate methodology for quantifying methane emissions from waste disposal (instead of the IPCC FOD model, which should only be applied to the Scope 1 emissions for landfill operators or governments owning/operating landfills) and provide explicit guidance to the local government on using WARM.

While the WARM model is often used as a lifecycle tool to calculate the benefits of recycling, subtracting out both the lifecycle component of the tool and the landfill sequestration leaves a valuable methane generation methodology that has been used by hundreds of communities to generate methane emissions from their waste. While the use of FOD and WARM do not yield significantly different results, the WARM model is much more user friendly and easier for local jurisdictions to use. The WARM model has the following benefits:

- Being a widely recognized methodology endorsed by the EPA
- Accounting for all future emissions in the inventory year, which in turn greatly simplifies the data tracking and calculations required and sends an immediate signal as to the impact of the implementation of waste prevention and diversion measures.
- Following the standard practice set by all jurisdictions that have conducted inventories in the last 18 years under ICLEI's guidance
- Easier to use by local governments

It was emphasized at the July 10th Public Workshop on the Local Government Protocol in Sacramento (in regards to the calculations included in the Wastewater sector) that the partners developing the Protocol feel that it is important provide credible estimates for the important emissions sources that fall within the local government's control and not necessarily wait for the perfect quantification methods to be developed. We feel that the same reasoning and motivation should apply to the waste sector and encourage the Protocol

to not exclude this significant source of greenhouse gas emissions from local government operations.

12.2.2 pg 108

7. **Encourage local governments to report upstream emissions that result from decisions surrounding purchasing and product disposal and provide guidance on how to complete those calculations**. This will incorporate information into the inventory about the full spectrum of emissions that are generated by a local government's purchasing, disposal and waste diversion decisions. These calculations could be as simple as entering landfilled waste into the life-cycle part of the WARM model. By entering all waste being landfilled in the baseline year into the alternative waste diversion categories in the WARM model (and zeroing out the landfill emissions to avoid double counting), local governments can create a snapshot of the upsteam and downstream emissions that occur as the result of their decisions to purchase/produce and subsequently landfill goods and materials.

While this comment period is intended for the "local government protocol" only, we have similar concerns with the upcoming Community Protocol as well. We think it's important to acknowledge the fact that local government emissions only account for 5% of the entire community emissions in all the emission sectors. Local governments' greatest impact on climate change will come via policies, programs, incentives and disincentives targeting community emissions and waste generation and disposal is no exception. Local governments have as much control over the production of waste in the community (though franchises agreements with recycling provisions, mandatory recycling ordinances, etc.), arguably more, even, than they do with transportation and energy emissions. Therefore, the upcoming community protocol should also account for the emissions from the community's waste disposal and these emissions should be apportioned back to the community that generates the waste and not just to the local government operating the landfill.

Sincerely,

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