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Climate Action Reserve
Attn: Policy Team
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Re: Public Comments on Draft Version 4 of the Landfill Project Protocol

Dear Policy Team:

The Size Threshold (LFGTE projects only) update proposed as part of the Performance Standard Test requirements are supported by an analysis that is incomplete in several respects. First, the analysis in Appendix A of the Version 4 Draft Landfill Project Protocol, specifically A.4 New Performance Standard Criterion #2: Size Threshold on LFGE Projects, ignores the effect of time on methane production.

The sample set of projects chosen to support the conclusions of this section exclude LFGE projects in which the project start date diverges by more than three years from the date waste in place was reported. While the stated reason for excluding these landfills is "to control for temporal disparity," this methodological choice doesn't actually provide this control, but instead simply ignores the effect of age (time since closure) as a factor in the economic viability of LFGE projects. Because methane production in a landfill peaks shortly after closure and declines steadily thereafter, any LFGE project is most viable shortly after the landfill closes – as time after closure increases LFGE projects become less viable without revenue from the sale of environmental commodities such as GHG offsets.

Given that the stated basis for the size threshold is the amount of methane being produced, a far more accurate and realistic control for temporal disparity would relate the amount of waste in place to the time since the landfill's closure. Precipitation levels have a much greater impact on the rate of methane production than on the total volume of methane a landfill will produce over its lifetime, and methane production from landfills in "wet" areas is far higher than in "dry" areas shortly after the landfill closes. However, as the time after closure increases, landfills in "wet" areas have less methane production than their counterparts in "dry" areas, and within a decade after closure landfills in "wet" areas are far less viable candidates for a LFGE project than the exact same landfill in a "dry" area because of the comparatively rapid decline in methane production experienced by landfills in "wet" areas.

So, the additionality of GHG offset revenue for LFGE projects located in "wet" counties increases in direct proportion to the time since the landfill's closure. The flow of methane, or energy, from a landfill is a function of both the amount of waste in place and time since closure. Waste volume and time are interrelated and inseparable variables for any accurate assessment of LFGE viability, and either factor alone is insufficient to serve as a proxy indicator of methane production, and therefore insufficient for use as the sole determinant of additionality as pertains to the necessity of LFGE projects receiving GHG offset revenue in order to be viable.

Secondly, the economic viability of LFGE projects is not predicated on the volume of gas alone, but rather depends on the value of the energy carried by the methane. Whether considered against electricity prices or natural gas prices, this value varies widely across the country. According to the Energy Information Administration, average retail electricity prices range from a low of $0.06/kWh to a high of $0.21/kWh, and natural gas prices exhibited a similar spread across the states from a low of $4.65/mmBtu to $12.92/mmBtu (excluding Hawaii) in 2009. While state-by-state prices vary considerably, larger regions of the country tend to have similar price characteristics, especially for electricity, and the use of pricing metrics based on e-GRID regions or subregions could be incorporated in the determination of what maximum methane flow volume constitutes a LFGE resource for which GHG offset revenue would be considered non-additional.

In regard to the proposed "Renewable Energy Certificate / Green Power Exclusion (LFGTE projects only)" update to the Performance Standard Test, the either-or tradeoff between RECs and GHG offsets does not accurately reflect market realities and appears to be justified based on the use of implicit assumptions of a questionable nature. Specifically, this proposed exclusion appears to rely heavily on the implicit assumption of an efficient market for both RECs/green power and GHG offsets when these environmental commodity markets are anything but efficient.

Environmental commodity markets remain in an emerging status, are highly fragmented and differentiated geographically, and are not necessarily accessible to all potential participants. LFGE projects, in particular, are subject not only to the policy risks facing all market participants, but also an enhanced degree of project-specific risk, especially those projects being considered at older, smaller, closed landfills. The return on risk necessary to justify the substantial investment in a LFGE project presents a very real barrier to a supermajority of potential LFGE projects even without environmental commodity revenue, and the potential value of environmental commodities is heavily discounted in pro forma financial analysis due to the high degree of uncertainty associated with the future value of these environmental commodities.

A large portion of smaller, older non-NSPS/EG landfills are owned by municipalities or local governments, organizations which tend to be risk-averse and non-speculative. The development of LFGE projects by these landfill owners are not only constrained by the lack of development incentives such as tax credits, but are also impeded by asymmetrical information barriers in both technical aspects of LFGE development and in knowledge of environmental commodity markets. These informational and financial barriers result in a level of uncertainty whereby the potential future value added to LFGE projects from the combination of RECs/Green Power and GHG offsets is discounted to reflect the perceived level of risk such that market prices today are not supportive of LFGE project investment, especially at landfills that closed years ago where the rate of methane production is greatly diminished from its peak.

I believe the Reserve could preserve its desired maximum rate for incorrect inclusions of 5% while simultaneously reducing the rate of incorrect exclusions at landfills in "wet" counties, in particular, by incorporating the following into its analysis:

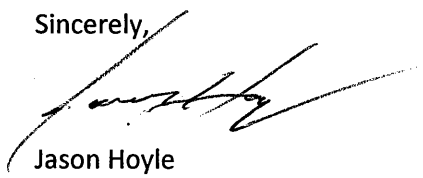
- Factoring the waste-in-place volume as a function of time since closure for determining a LFGE project's economic viability without environmental commodity revenue; and,
- Further adjusting the interpretation of methane flow proxy indicators (waste in place, precipitation and time since closure) to reflect the value of energy with greater localization.

Furthermore, I urge the Reserve to consider the extent to which the proposed changes to the Performance Standard Test will result in unintended and undesirable consequences that are entirely avoidable. The expanded additionality tests, if implemented as proposed, would radically alter the carbon market landscape in the U.S. by unnecessarily restricting the supply of GHG offsets and result in higher levels of GHG emissions than would otherwise exist were the status quo additionality requirements maintained.

From a macro-scale perspective, the proposed additionality tests are also disconcerting as they would virtually mandate that future landfill gas projects earning CRTs are operated in the most economically unproductive and resource-inefficient manner as possible. In fact, the proposed prohibition against the use of energy from landfill gas projects earning GHG offsets appears contrary to some of the most stringent and highly credible certifications available for GHG offsets such as the CDM Gold Standard.

In conclusion, I recommend that the Reserve modify or eliminate the proposed eligibility thresholds, and that the size threshold be re-evaluated to account for both the significant and deleterious effect of time on LFGE project viability and substantial regional differences in the value of energy. Likewise, the decision to mandate mutual exclusivity between environmental commodities should be thoroughly considered in light of current carbon market inefficiencies, investors' required return on risk, and the discounted valuation of environmental commodities resulting from the high degree of uncertainty associated with these assets. Lastly, the proposed updates should be reviewed for their likely impact on aggregate GHG emissions, the extent to which they deviate from widely accepted GHG protocol best practices, and their potential to undermine the credibility of the Reserve's offset program by effectively prohibiting economically and resource-efficient activities from participation in markets for GHG offsets.

Sincerely,



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