



Organic Waste Digestion Project Protocol Team  
Climate Action Reserve  
523 W. Sixth Street, Suite 428  
Los Angeles, CA 90014

September 9, 2009

Re: Comments on CAR Organic Waste Digestion Draft Protocol

Dear Climate Action Reserve Team:

Ze-gen Inc. is emerging as a leader in the development of advanced gasification technology that converts solid waste streams into synthesis gas (a mixture of hydrogen and carbon monoxide) for use as a renewable fuel in industrial and commercial applications. The firm's business and technology strategy is centered on the commercialization of its Liquid Metal Gasification (LMG) technology that converts solid waste into syngas to produce thermal and electric energy. On the commercial level, Ze-gen's technology has the potential to offer significant greenhouse gas emissions reductions, as the process diverts waste from the landfill for beneficial use as a carbon-neutral fuel. Hence, Ze-gen has a strong interest in seeing that the U.S. develops effective protocols that encourage alternate treatment of waste that is currently landfilled but can be diverted and put to beneficial use. We therefore appreciate the opportunity to submit our comments on CAR's draft Organic Waste Digestion (OWD) Protocol and are available for further consultation or discussion as needed.

The following are Ze-gen's comments on specific provisions in the Draft OWD Protocol:

**Section 5.1.1, p. 22: Immediate Crediting**

Ze-gen is very pleased that CAR has incorporated immediate crediting of emissions credits as part of the draft protocol. We believe it is essential to the development of carbon emissions reduction projects. CAR effectively differentiates itself from other protocols that have failed to adopt immediate crediting, such as the CDM composting protocol, which have failed to spur sufficient project development.

Recommendation: Ze-gen recommends that CAR remain committed to including immediate crediting of avoided carbon emissions from decay that would have taken place in future years in the OWD Protocol.

**Section 5.1.1, p. 22: Number of Years of Decay**

Ze-gen fully supports CAR's interest in using conservative estimates for emissions reductions however we believe that an abbreviated decay period for organic waste will discourage development of technologies and methods that divert waste from landfills. Specifically, the protocol design choice to credit emissions reductions for only the first 10 years of the decay does not fully account for the carbon dioxide emissions produced through landfill avoidance. As a company intimately familiar with the positive economic benefit of landfill avoidance and diversion for beneficial use, we think it is important

to accurately quantify the avoided landfill emissions. We therefore recommend that CAR set its protocol assumptions in line with the EPA LandGEM model which calls for using 100 years as the time horizon for calculating emissions from the decay of landfill waste. We believe that using a period of only 10 years is overly conservative and may set a dangerous precedent for all avoided landfill waste protocols in the future, thereby, mischaracterizing the truly far-reaching benefit of landfill avoidance projects on greenhouse gas emissions. In order to effectively incentivize the diversion of slower-decaying wastes from landfills, we believe CAR must include a longer decay rate window, otherwise food waste projects will be favored at the expense of other prevalent organic waste streams that have equal or greater overall greenhouse gas emissions impact.

It is also important to consider the impacts of this rule on other waste types, such as wood waste, that could also be diverted from landfills and used in a more beneficial manner. While wood generates similar levels of methane to food waste, the lifecycle emissions from food decay happen more rapidly. This means the proposed 10 year window of decay captures approximately 85% of the emissions from food, but only captures 27% of the emissions from wood. We believe it is fully appropriate to extend the window to 100 years, a time period that is recommended by the EPA and captures all the emissions from the decay of food as well as most of the emissions from wood waste.

Recommendation: Ze-gen recommends that CAR follow EPA's recommendation for modeling and allow credit for avoided carbon emissions resulting from 100 years worth of decay.

**Section 3.4.2, p. 8: Regulatory Test Which Truncates Crediting Due to New Regulatory Requirement**

Ze-gen fully recognizes the underlying goal of the proposed Regulatory Test to ensure that the emission reductions achieved by a given project are uniquely beneficial and would not otherwise have occurred due to federal, state or local regulatory requirements. However, we respectfully disagree with the protocol's requirement that the Regulatory Test be applied for each verification period, with credit eligibility being subject to truncation in the event of a regulatory change that requires the project waste stream be diverted from landfills. It is Ze-gen's position that if a project's waste stream(s) is eligible for emissions reduction credits at the time of project inception, it should remain eligible through the life of the project, regardless of whether or not an exogenous regulatory event occurs to change rules of waste diversion.

As a renewable energy company in the business of creating and commercially developing technology that reduces landfill waste by diverting waste material to beneficial use, the potential project financing risks associated with this protocol provision are substantial. In order for a development project to attain financing, it is often required to accurately forecast cash-flows and return on investment. Revenue from carbon emissions reduction credits are often an important portion of revenue for renewable energy projects and certainty regarding the level and duration of these revenues is critical for attaining the financial resources to build the project. The draft OWD Project Protocol would allow an exogenous event, a regulatory rule change at the federal, state or local level, to instantly invalidate the eligibility of emissions reduction credits to a long-lived project – one with a time horizon of 20 years or more. This event would materially impact revenues to the project and, consequently, the project's ability to meet its credit obligations. A rule such as the one proposed in Section 3.4.2 will likely lead to substantial

restrictions in available financing for organic waste digestion projects due to revenue uncertainty and therefore fewer projects would be developed under the protocol. This would run counter to the goal and spirit of the proposed protocol and would make it much more difficult for renewable energy companies like Ze-gen to develop meaningful projects in the future. We ask that you consider the second-order effect of the proposed the Regulatory Test eligibility requirements on financing as you finalize the OWD project protocol.

Recommendation: Ze-gen recommends that CAR modify the wording of the draft OWD project protocol to ensure that emissions reduction credits are not truncated if regulatory requirements were to change at some point during the crediting period.

In summary, we submit the above comments to you with our sincere thanks for all the work you have done to create a new and novel protocol for organic waste digestion projects. If you have any questions or would like any additional information, please do not hesitate to contact me or Gideon Gradman, my Vice President of Corporate Development at (617) 674-2443.

Sincerely Yours,

Ze-gen, Inc.

A handwritten signature in black ink, appearing to read "Bill Davis", written over a horizontal line.

Bill Davis  
President and CEO