

REVIEWER: PROOF OF CONCEPT

Rating 1 Narrative: Fair – Response does not adequately demonstrate that the solution will result in significant development impact within ten years, numerous questions or concerns exist.

Factor 1 Strengths:

The application clearly outlines that it wants to scale through the private sector (pg 4).

Cost Share: \$300,000 to match our \$100,000. Source of funding is identified.

Solution: "A proven technology called anaerobic digestion could transform these development hurdles into investment opportunities. We propose to divert organic MSW from landfills, convert this waste into biogas (mostly methane), and combust the gas to produce renewable electricity. The digested wastes are then used as a nutrient- rich fertilizer."

Country Location: "The Ugandan government recently announced favorable 20 year rate guarantees for biogas electricity. With more than 200 micro- scale biogas digesters deployed across the country, Ugandans are familiar," which provides a favorable political environment.

Factor 1 Weaknesses:

Development Challenge: Too broadly defined "rapidly urbanizing and expanding population causing problems with electricity outages, waste, deforestation, & soil depletion."

While the application clearly outlines that it wants to scale through the private sector, the application does adequately provide detail about how this pathway will be pursued (pg 4). The application does not adequately outline what the technology is that the project would scale. What would the proof of "concept system in Kampala that would process 1 ton of waste a day and generate 5kW of electricity and modest volumes of fertilizer" be implemented (pg 4). The application does not clearly outline how the system would manifest within the field.

Rating 2 Narrative: Fair – Response does not adequately demonstrate feasibility to be more cost-effective than competing alternatives, numerous questions or concerns exist.

Factor 2 Strengths:

Competing alternatives: they have done Their background research on alternatives and why they have not succeeded.

Factor 2 Weaknesses:

cost effectiveness: no clear support for how and why Their solution will be more

cost effective.

The application does not adequately demonstrate the cost considerations of the alternative models nor does the application outline why this project system is more cost-effective (pg 6). The application only states that "it will be competitively priced" but does not outline the markets the system or fertilizer is trying to penetrate (pg 6).

***Rating 3 Narrative:** Fair – Response does not adequately demonstrate the project team and partner organization(s) (if applicable) offer the opportunity to bring skills and expertise necessary, numerous questions or concerns exist.*

Factor 3 Strengths:

The application clearly outlines an evaluation plan with three different focuses (pg 7).

Factor 3 Weaknesses:

The application does not provide enough detail in describing the improved food security focus how many selected smallholder and commercial farmers will be utilized in the study? (pg 7). The application does not outline the methods of measuring cost-effectiveness.

***Rating 4 Narrative:** Very Good – Response demonstrates the project team and partner organization(s) (if applicable) offer the opportunity to bring skills and expertise necessary to achieve the proposed objectives.*

Factor 4 Strengths:

partners: Include Makerere Univ. Ctr for research in energy & energy Conservation. UW-Madison Global Health Institute
project team Members: support provided for each member, several PhD students from both Uganda and Univ. of Wiscosin. the women have also won Three prestigious National Science Foundation grants
The application clearly outlines the individuals and partners involved in this project. The application clearly has key personnel who have deep sector experience as well as the needed skills and experience (pg 7 and 8).

Factor 4 Weaknesses: