

**Applicant Name: City of Reedley, Project Title: Organic Waste Energy Conversion Project**

**Project Description:** The City of Reedley has a proud heritage of supporting innovation in its diverse, tightly knit farming community. Despite this support, many small, family farms in this area struggle financially, and over 50% of community members are considered “Low Income” households. What is needed now is a new source of income to supplement farm income and improve air quality for this community.

The purpose of this project is to conduct a feasibility study on the technical, economic, social and environmental viability of a centrally located Continuous Stirred Tank Reactor (CSTR) anaerobic digester in the City of Reedley, California using a variety of waste feedstocks and converting biogas produced by the digester into various renewable transportation fuels. The project team plans to test various blends/recipes of citrus and seasonal food crops, food waste, green waste and cow manure in a manner that optimizes digester production throughout the year. In summary, the main goal of this feasibility study is to determine the type and amount of organic waste the anaerobic digestion system can handle, and how RNG output is affected by seasonal variability in type and amount of waste streams. Specific goals/objectives:

- Determine available feedstock resources within a 100 mile radius of the City of Reedley and surrounding communities.
- Select feedstock blends/recipes for compositional analysis and testing of methane content.
- Conduct biochemical compositional analysis of 50-100 samples of feedstocks and feedstock blends. In addition, determine the compositional analysis of digestates from the biomethane potential tests
- Prepare preliminary engineering design for the digester system and various options to convert biogas into various renewable transportation fuels (e.g., RNG, bio-diesel, SAF, electricity for EVs, clean hydrogen). Prepare CapEx and OpEx cost estimates for TEA/LCA modeling work.
- Perform techno-economic analysis (TEA) and Life Cycle Assessment (LCA) modeling work.
- Describe how the proposed project will benefit the local community, including DEIA impact.