

**Item #5**  
**April 20, 2011**  
**Energy Commission Business Meeting**

**NORTHSTATE RENDERING CO INC.**

**Grant Agreement ARV-10-040**  
**for**  
**Anaerobic Digestion of Rendering Waste to**  
**Produce CNG Vehicle Fuel**

**Summary**

Northstate Rendering Company, Inc. is proposing to build an anaerobic digestion facility and biogas upgrading/compression system at their existing rendering facility in Oroville, CA. The facility will produce biogas that will be upgraded to a renewable natural gas (RNG) standard for use as a vehicle fuel for Northstate Rendering's fleet of delivery trucks. The company will process waste that is often ignored in food production processes: dead dairy cows, slaughterhouse waste, and food processing waste. These materials have significant biogas production potential when anaerobically digested.

To complement the biomethane production facility, an onsite fueling station will feed the RNG to a fleet of 14 trucks used to haul waste products which will be retrofitted with compressed natural gas fueling systems. Any surplus biomethane will be injected into the natural gas pipeline at the facility to supply CNG fueling stations throughout California. Once completed, the project will produce 53,000 MMBtus of biomethane annually, which will displace over 370,000 diesel gallons and save 20,300 tons of carbon dioxide emissions per year. This project will promote broader adoption of waste-to-fuel systems by creating an integrated waste-to-vehicle fuel system to produce California-sourced fuel.

The Energy Commission is providing \$5,456,150 in Alternative and Renewable Fuel and Vehicle Technology Program funds and the project team will provide \$5,456,150 in match funds.

**Benefits**

This project will result in the creation of 36 permanent jobs and retention of 2 jobs in Butte County where the unemployment rate is 13.4 percent, 38 percent higher than the national average of 9.7 percent. When the facility becomes operational over 370,000 gallons of diesel will be displaced, 15,000 tons of CO<sub>2</sub> emissions will be reduced, and the feedstock that would normally end up in the landfill will be used to create a vehicle fuel. The biomethane produced will reduce GHG emissions by approximately 80 percent.

## **Participants**

Northstate Rendering is the principal applicant and owner of the proposed waste-to-biomethane facility. They operate a fleet of 24 trucks that pick up waste from dairy farms, slaughterhouses, and other businesses.

Biogas Energy Inc. is the general contractor for the anaerobic digester. They built over a dozen anaerobic digesters over the past fifteen years, which use dairy manure, food waste, grease trap waste, animal oils, and more as feedstocks. Biogas Energy built California's first high-rate dairy digesters at Fiscalini Farms in Modesto, CA, a recipient of a 2009 Energy Commission Public Interest Energy Research Program's grant.

Key partners include the Butte County Air Quality Management District and Butte County.

## **Implementation Schedule**

Upon execution of the agreement, the recipient anticipates that the project will be completed in approximately 18 months.