(13) Distributed Energy Resources – Expanding DER Applications in Target Markets
This two-year project will develop and demonstrate a two-phase biofermentation system to produce methane from dairy manure and reuse resulting solids as a beneficial amendment to the soil while producing heat for internal use and electricity for sale. The process also involves a low water usage technology. Results will be documented and disseminated nationally.

Total project cost: $749,431
Funding request: $336,949
Project Lead: New Mexico Energy, Minerals, and Natural Resources Department
Project Participants: Texas State Energy Conservation Office; New Mexico State University; Terra Verde; North American Development Bank; Burcham & Associates; New Mexico Economic Development Department, Office of Science and Technology; Public Citizen; West Texas A&M; Gonzalez Dairy, Inc.

Patents
None.

Presentations/Publications
None.

Progress in Past Quarter and Current Status

The project team has:

- Continued to perform test runs using scale digesters.
- Continued to refine the design checklist that incorporates assumptions and calculations used in this experimental design to demonstrate thought process for future development.
- Final design has been made with construction starting June 20, 2006.
- Issued third formal bid package through the NMSU purchasing department with a new set of simplified requirements to potential suppliers for four bio-digester containers; each has agreed to submit a bid.
- Met with Jim McNelly, president of Renewable Carbon Management LLC of Minnesota, at the Sandoval County Landfill. Discussed future collaborative efforts and are awaiting more information from Mr. McNelly.

Plans for Next Quarter

The team will:

- Complete construction of site.
- Accept delivery of bio-digester units.
- Purchase necessary instrumentation.
- Construct biogas flare for excess gas.
- Start filling digester units.
- Continue working with El Paso Electric on engineering study and interconnection issues and delivery of electricity to the site.
- Continue gathering data on biogas production and growing cultures in bioreactor.
- Continue to affirm that all permitting requirements are being satisfied.
- Finalize schedule for first set of experiments at the facility.
- Continue to produce feeder stock for the reactor.
- Continue negotiations with Jim McNelly of Renewable Carbon Management to support collaborative efforts.