

Contract No. R-031-040
“A Novel Approach to Reduce the Energy Consumption of Residential Homes”

Submitted by Terra Labs

Principal Investigator: Daniel Schwandt

PARTICIPANTS

Sponsor	Cost Share
The City of Horace	<u>\$961,664</u>
Subtotal Cash Cost Share	\$ 961,664
North Dakota Industrial Commission	<u>\$500,000</u>
Total Project Cost	\$1,461,664

Project Schedule – 12 months

Contract Date – Contract Not Executed

OBJECTIVE/STATEMENT OF WORK:

The purpose of this project is to develop a community heating and cooling system that utilizes geothermal energy and heat pumps to provide affordable and efficient energy for a residential community to be built in Horace. The system will be owned by the City of Horace. Cost savings will be realized through joint trenching with water main along with shared heating and engineering design in the well field.

Expected results of the project include:

- Provide heating and cooling to at least two hundred residential homes that is consistent, economical and energy efficient.
- Develop an effective load management method that improves heating and cooling load efficiencies thereby reducing the electricity demand on existing utility infrastructure.
- Demonstrate the feasibility of and opportunities for both residential geothermal heat pumps and community scale heating and cooling projects.

The remaining costs of the project will be funded through a special assessment by the City of Horace.

STATUS:

The award was made with the contingency that results from Phase I (feasibility study, design, approvals and permitting) of the project would be obtained prior to any disbursement of funds from the Renewable Energy Program. Because the applicant is no longer completing the project as described in the original proposal, including Phase I, the award has been terminated and no contract was executed.

Updated 3/7/2018