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April 13, 2015

Andrea Holl Pfennig
Program Administrator, Energy Outreach & Special Programs
ND Department of Commerce
1600 E Century Ave, Suite 2
PO Box 2057
Bismarck, ND 58502-2057

RE: UND Project Titled Distributed Geothermal Energy - Contract No. R-021-030

Dear Ms. Pfennig:

The University of North Dakota is requesting a budget increase for their project titled “Distributed Geothermal Energy” currently funded under Contract No. R-021-030. The current project is funded at a level of \$100,230 from the Renewable Energy Council with match coming from the U.S. Department of Energy, Access Energy, and UND. We are requesting to increase the level of funding from the Renewable Energy Council to \$261,000. The new matching funding is expected to come from Basin Electric and an increased commitment from Access Energy. A revised budget detailing the new level of funding and match is included.

The new budget (see attached) reflects an update in the estimated cost of installing the equipment at the Continental Resource Davis Site and includes additional funding to support the salary and travel costs for the principal investigators to monitor and broadly disseminate results from the technology demonstration. Also reflected in the revised budget is a change in the sponsoring partners.

Part of the changes noted in this request follow a change in the management structure at Access Energy. Under their new business model, they are shifting more of the project management role unto UND and shifting some of expenses that have impacted the cost of finalizing the installation. This has impacted the budget by adding travel expense for the UND team to travel to the site and has increased Olson Construction’s installation bid. We have worked with Olson Constructions who is doing the site work for the project, and have worked out the work scope such that this change will not compromise the integrity of the project. Access Energy is still very committed to the demonstration project as reflected by a significant increase in their in-kind cost share.

The additional costs proposed in this letter also reflect costs associated with the dissemination of the results. While our original proposal included this task, the cost was not included in the original budget due to our lack of available matching funds. We will also expand our analysis to explore the feasibility of applying this technology to other low-grade heat sources. This task is important to our new partners. The project team can do a much more comprehensive job disseminating the results of this work with the funding proposed with this request.

The project team has worked with Basin Electric to secure the necessary funds to make this project whole. Basin Electric has a particular interest in this project as it offers them and their associated cooperatives an option of providing electricity to some of the remote sites without the need to build transmission lines. The project also provides an option they can use to increase their renewable portfolio. This request, therefore, asks the NDIC through the Renewable Energy Council to provide funding to match that provided by the utility company.

Continental Resources Inc. (CRI) and Olson Construction (the firm CRI utilizes for their on-site work) are poised to install the system in the May and June timeframe, with start-up to commence in mid-June. Therefore, we are hoping for an indication of support soon.

If you have questions or require additional information, please contact me at 701-777-3852 or michael.mann@engr.und.edu.

Sincerely

Michael D. Mann
Executive Director
Institute for Energy Studies

Harmon Abrahamson
Interim Associate Vice President
Research & Economic Development

Revised Budget

	NDIC	Cost Share	Total
Salaries ¹	\$8,360	\$0	\$8,360
Fringe Benefits	\$2,508	\$0	\$2,508
Travel ²	\$4,860	\$0	\$4,860
Supplies ³	\$6,019	\$0	\$6,019
Olson Construction ⁴	\$226,068	\$83,000	\$304,256
Access Energy ⁶	\$0	\$178,000	\$178,000
F&A ⁵	\$13,185	\$4,813	\$17,998
Total	\$261,000	\$261,000	\$522,000
Current Commitment	\$100,230	\$100,230	\$200,460
New This Request	\$160,770	\$160,770	\$321,540

¹Salary dollars are included to cover faculty and researcher time to manage the installation, provide time to travel to the site, to monitor the operation, and to fully develop and disseminate the results.

²Travel includes three trips to the project site for installation and monitoring and one trip to Bismarck to meet with NDIC and Basin Electric to review project results.

³Miscellaneous supplies are included to cover supplies that are not covered under the contract with Olson Construction. We expect these to include software and hardware required to remotely connect the geothermal system with offices in Grand Forks.

⁴Olson Construction will be responsible for purchasing the necessary piping and valves, site preparation, piping fabrication, and installation of the equipment and the associated electrical interconnects.

⁵UND's federally approved indirect rate is 38.5% charged on direct costs minus equipment and on the first \$25,000 of any subcontract.

⁶Access Energy has committed to covering the expenses related to charging the system with refrigerant, transporting the system to the site, and covering the salary and travel associated with the final shakedown and installation of the system. These costs are shown under the cost share column in the budget.

Source of Cost Share

US DOE	\$97,000
Access Energy	\$109,000
Basin Electric	\$55,000
Total	\$261,000