# *From time to time unforeseen challenges or opportunities can affect the planned budget, timeline, or overall goals of a project funded by the Student Sustainability Committee. Past examples of these situations include projects coming in under budget but having additional opportunities available, or inclement weather delaying the planting of agriculture projects.*

# *Below please include a brief project summary and your requested changes. Attach additional documents as needed. If you have any questions, please contact the Student Sustainability Committee at sustainability-committee@illinois.edu.*

# General Information

**Project Name:** Geothermal exchange for greenhouses at UIUC Woody Perennial Polyculture Research Site now known as “Geothermal exchange for greenhouses at UIUC Energy Farm.”

**Total Amount Requested from SSC:** $81,000

**Date of Scope Change Submission:** 06/14/2023

# Contact Information

Project Lead Name: Andrew Stumpf

Scope Change Applicant Name (if different than Project Lead):

Unit/Department: Illinois State Geological Survey / Prairie Research Institute

Email Address: astumpf@illinois.edu

# Project Information

Please provide a brief background of the project, the goals, and the desired outcomes:

The proposed project will involve the design, construction, and installation of an innovative geothermal system that includes field testing of ORNL’s proto-type underground thermal battery with traditional geothermal boreholes to heat and cool part of the Energy Farm. Data will be collected before and during the operation of the geothermal system. After the geothermal system is commissioned, data will be collected for at least one year to validate the energy savings. Students will be involved in the data collection and analysis. After validating the energy savings, is hoped the same technology can be deployed at other campus buildings.

Please provide a brief summary of how students will be involved in the project’s changes:

Students will be involved in the data collection and analysis. Classes and student groups to visit the Energy Farm to learn more about this innovative geothermal technology.

Mark the components for which you are applying to change. (Mark all that apply.)

[ ] Overall goals

[ X ] Budget

[ X ] Timeline

* Original Timeline: 12/31/2023
* New Timeline: 12/31/2024

[ ] Other

Please provide a brief summary of your requested scope change. How is your request different from your original plan? Please explain the reason for the proposed changes.

We request additional funding to offset the unforeseen cost increases. We request an extension to the project to collect data for 1 year.

Additional comments (Optional)

Funding from the following programs is pursued in addition to this scope change request:

* After completion of the project, the U of I Tax Office will apply to the IRS for a renewable energy credit, that will be in the form of a direct payment to the University. It is anticipated the project would qualify for a 40% credit on the total cost of the project (~$220,000), which would return a direct payment to the U of I of ~$88,000. The IRS still has not published guidelines for applying for direct payments (guidelines will likely be published in June). It is anticipated, the renewable energy credit application could take 1-2 years to be processed and it is uncertain if the federal government will have enough funding to support all of the projects that apply.
* After six months of data collection, F&S can complete an application to Ameren for an energy efficiency rebate, which could be ~$25,000.
* The project will apply to the F&S Revolving Loan Fund to allow energy cost savings from operating the geothermal system to pay back the budget deficit.
* We are seeking additional funding from ORNL.

Since this is the first time the U of I would request a direct payment from the IRS, the university administration has not developed guidelines on who receives the direct payment. Therefore, we do not know if the SSC could be reimbursed for any additional funding provided through a scope change. A similar decision would be made for distributing the rebate from Ameren.