



CLEAN ENERGY REVOLVING FUND

1668 Princeton Ave - Insulation

Project Overview

1668 Princeton is home to the Russian House and typically has 4 student residents. The wall cavities, roof and basement walls were all insulated with HeatLock soy-based foam insulation. The closed-cell foam simultaneously insulates and air seals the house, which is very useful in homes as old and leaky as this residence.

Project Goals

The hope was to reduce the amount of gas required to heat the house. We also hoped to make the house more comfortable for the students living there. Another goal was to test out the HeatLock foam. Foam insulation is more expensive than blown cellulose and has a higher rate of insulation, so this house is an experiment to see if the cellulose or the foam is more cost-effective in the long run.

Pre-Project Considerations

The insulation work had to be done before students moved in for the beginning of the semester. The foam also required a lot more holes to be drilled in the walls than the blown cellulose we have used in other projects, so we had to make sure that the painters would be able to handle the additional work on the short timescale.

The Project Process

Building Manager Mike Hall contacted CERF interested in trying out this new insulation product on one of the particularly drafty houses on campus. He chose 1669 Princeton, and Justin Lee did the energy savings calculations and created the proposal to send to CERF. The entire project turn-around was about a week.

Lessons Learned

- The foam insulation immediately cut drafts and water leakage into the basement and made the house more comfortable.
- CERF will compare the cost-effectiveness of Foam vs. Cellulose insulation at the end of the current heating season.

<p>Project Snapshot</p> <p><i>Economics:</i></p> <p>Total Project Cost: \$6,025 Annual Cost Savings: \$991 Payback: 6.1 Years</p> <p><i>Environment:</i></p> <p>Annual Savings: 792 therms 3962 kg CO₂</p> <p><i>Equity:</i></p> <p>More comfortable living space</p>	<p>Project Contact</p> <p>Mike Hall – Building Maintenance Manager (651) 696-6754 hall@macalester.edu</p> <p>Project Participants</p> <p>Justin Lee - student</p>
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