Glass Block Solar Collector

Overview
Pittsburgh Corning, a leading manufacturer of architectural glass blocks, wanted to incorporate a solar collector into their blocks to create a new product to help stay competitive in the glass market. The company asked the project group to come up with an effective solution to this problem. It was the goal of the team to incorporate solar collectors into glass blocks and provide an application for the collected energy.

Objectives
The team’s objective was to deliver a working glass block solar collector to the sponsor. The collector incorporated a solar panel that charged a battery unit. The battery powered decorative internal LED lighting that could be controlled with a remote.

Approach
- Received problem description from sponsor
- Generated several project ideas and selected the best one with the sponsor’s input
- Visited the Pittsburgh Corning manufacturing plant to learn more about the glass block business and the glass making process
- Developed project design and created prototype blocks
- Tested blocks for power output and battery performance
- Delivered a working 2x2 block prototype window to sponsor

Outcomes
- Delivered a working prototype to the sponsor
- The sponsor has a new product to stay competitive in the glass market