



Penn College - Williamsport

The Scott Home



Project Summary

We designed the Scott Home based on the needs of our community and planned our project in conjunction with our local Habitat for Humanity. From the very beginning we were committed to obtaining PHIUS certification and providing affordable, accessible housing. The key to our project's success was incorporating complete building integration into our design.



Relevance of Project to the Goals of the Competition

The goal of Habitat for Humanity was to provide affordable housing for homeowners earning between 20%-30% of the median income of Williamsport. With both comfort and affordability in mind we decided to pursue a passive house design approach. By exceeding both the competition and sustainable benchmarks our team was able to design a comfortable, sustainable home at an introductory housing market value. Renewable energy design package options allow for affordable monthly utility bills.



Design Strategy and Key Points

Southern oriented windows allow for continuous natural daylighting. Designed overhangs provide shading during the overheated periods of the year and allow for solar heat gain during the colder winter months. The stamped concrete floor around the living room windows acts as a thermal mass that helps control diurnal temperature swings. The Scott Home features super insulation and super sealing construction techniques to mitigate heat transfer and air infiltration.

Project Data

- **Location:** Williamsport, Pennsylvania
- **Climate:** IECC Zone 5
- **Square Footage:** 1644 SF/unit
- **Size:** 2 Stories, 3 Bed, 1.5 Bath
- **HERS Rating:** 20
- **Monthly Energy Cost:** \$39.96

Technical Specifications

- **Wall Insulation:** R-56
- **Foundation Insulation:** R-40
- **Roof Insulation:** R-75
- **Window Performance:** R-8.1/ SHGC: 0.5
- **HVAC:** 1.5 ton/ 19.5 SEER/ 9 HSPF mini-split Heat Pump

