



## Pennsylvania Department of Environmental Protection Cambria Office

**Building:** Pennsylvania DEP Cambria Office Building

**Opened:** October 2000

**Location:** Ebensburg, Pennsylvania

**Size:** 36,000 sq/ft, 2 Stories

**LEED Rating:** 2.0 Gold

**Description:** The Cambria office was the first building in the United States to receive the LEED 2.0 Gold certification. This building also was the first in the U.S. to feature insulated concrete forms (ICFs) using expanded polystyrene rigid foam insulation. In 2000 it was chosen with four other buildings nationwide to represent the U.S. at the International Green Build Challenge: Sustainable Building 2000 Convention.

During the planning process, building designers knew they needed insulation with a high R-value rating to help cut down on energy usage. They also wanted a wall system that was stronger than normal stick-built construction. The designers quickly realized that the perfect solution to their insulation and structural needs would be an ICF wall system. With the expanded polystyrene insulation sandwiching the concrete core, the designers saw a drastic reduction of thermal movement passing from one side of the wall to the other. The thicknesses of both expanded polystyrene and concrete provide an outstanding insulation rating of R-30. The structural integrity was also reinforced with ICFs and the sustainability of the entire building was significantly extended.

With an insulation rating of R-30, the building consumes only a fraction of the energy needed to heat and cool itself compared to other similar sized structures. Overall savings in energy costs were approximately 66%. Calculations show that for every square foot of the building, only 0.65 watts of electricity are being consumed per day for heating and cooling. The building's cooling capacity was reduced to 52 tons, equating to 660 sq ft per ton, calculated to be a 50% savings.

### Building

<b>Statistics:</b>	Annual energy use (\$/sqft)	\$0.79
	Annual energy use (BTU/sqft)	39,500
	Construction Cost	\$93/square foot

### Other

**Awards:** 2002 Northeast Sustainable Energy Association first prize for Solar Electric Buildings  
2001 ACEC National Engineering Excellence Honor Award  
2001 PA Governor's Award for Environmental Excellence

