

LEED for Homes Project Snapshot

Helenowski Residence
Square 1 Precision Lighting
Chicago, IL
LEED PLATINUM

87% Expected Energy Savings
 Based on HERS Score

94% Construction Waste
 Diverted from Landfill



Reclaimed copper roof, gutters and fascia ▪ Thermostat on front windows operates motorized blinds for energy efficiency in summer & winter

Photo Courtesy of: Square 1 Precision Lighting

STRATEGIES AND RESULTS

This gut-rehab single-family home has been a labor of love for the owner, and achieved one of the highest LEED for Homes point totals ever. The homeowner took meticulous care to use reclaimed materials: the exterior uses reclaimed copper roof with stitch-weld seams for durability, reclaimed stone from blast fragments, and cement with fly ash. Inside, recycled content in all tiles, reclaimed dimensional lumber, and recycled-content drywall was used throughout.

A HERS rating of 13 was achieved by using CFC-free soy-based foam insulation, coupled with solar PV and a vertical axis wind turbine, resulting in a net-zero energy home.

EXEMPLARY PERFORMANCE

Efficient lighting was not achieved with traditional toxic CFLs (mercury) or LEDs (arsenic), but instead used cold-cathode lighting, which uses very low power over a long lifespan, and is up to three times more efficient than LEDs.

Thermostats on the front (west) windows operate motorized blinds to control heating and cooling. Additional strategies include vegetative green roof and reflective white roof. 100% of the roof area is used to capture rainwater for drip irrigation. A spa provides heat retention storage for excess heat from the geothermal HVAC system and passive solar thermal storage.

LEED™ Facts

Helenowski Residence



LEED for Homes
 Certification Awarded June 25, 2010

Platinum 119*

Innovation in Design 6/11

Location & Linkages 10/10

Sustainable Sites 17/22

Water Efficiency 15/15

Energy & Atmosphere 37/38

Materials & Resources 13/16

Indoor Environmental Quality 18/21

Awareness & Education 3/3

*Out of 136 possible points

PROJECT BASICS

Project Type	Single Family
Conditioned Space	3,300 sq ft
Bedrooms	6
Bathrooms	4
Lot Type	Previously Developed
Construction Type	Gut Rehab

KEYS TO SUCCESS

On Site Renewables	Solar PV, Vertical Wind
HVAC Type	Geothermal
Lighting	Cold-cathode fixtures
Air Filtration	ACH
Recycled content drywall (\$1 per sheet premium)	
92% of dimensional lumber is reclaimed	
Triple-paned FSC-wood windows w/internal blinds	

THE LEED FOR HOMES DIFFERENCE

Construction Waste Management Plan	<input checked="" type="checkbox"/> YES!
On-Site Performance Tests	<input checked="" type="checkbox"/> YES!
Custom Durability Planning Checklist	<input checked="" type="checkbox"/> YES!
Third-Party Verified Documentation	<input checked="" type="checkbox"/> YES!

About the Project Team

Square 1 Precision Lighting is led by Jacek Helenowski, who served as the builder and project manager on his home.

Architect: Mariusz Bleszynski, AIA
 Mechanicals: Comfortable Heating Inc
 Interior Design: Design Works
 Green Rater: Kouba-Cavallo Inc

LEED for Homes Provider:
 Alliance for Environmental Sustainability (AES)
www.AllianceES.org

About LEED for Homes

LEED for Homes is a voluntary, third-party certification program developed by residential experts and experienced builders. LEED promotes the design and construction of high-performance green homes, and encourages the adoption of sustainable practices throughout the building industry.



www.usgbc.org/homes

The information provided is based on that stated in the LEED® project certification submittals. USGBC does not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.