



Home before retrofit

Cold Climate Retrofit

Deep Energy Retrofit with Retrofit Insulated Panels

Location:

Minneapolis, MN

Size:

2,686 sq. ft.

Builder:

Vujovich Design Build

Retrofit Panel Provider:

Panelworks Plus

Total Reduction in Energy Use:

49%

HERS Index:

59

Energy savings per year:

\$1,371

Air infiltration before:

8.26 ACH50

Air infiltration after:

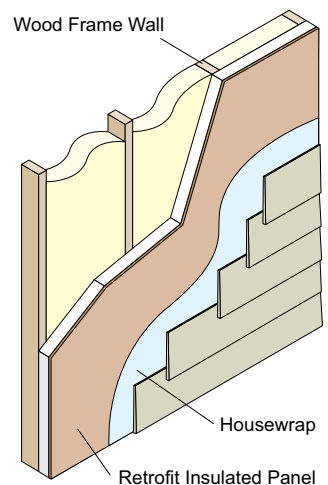
3.97 ACH50

Minneapolis builder Vujovich Design Build gave this classic craftsman home a facelift and cut its energy consumption by nearly 50 percent, largely through building envelope improvements. After removing the existing siding, 4-inch-thick retrofit insulated panels were installed over the exterior—providing continuous R-14 insulation, a complete air barrier, and a solid nailing surface for new siding. Crews sealed the rim joist with spray foam, added insulation to the attic, and installed new windows and doors. The result was a dramatic reduction in air leakage and thermal bridging for a more comfortable home and over \$1,300 in savings annually for the homeowners.

Energy-Efficient Features

- R-14 retrofit insulated panels over existing cavity insulation
- R-50 attic insulation (total)
- Low-E, U-0.30 windows
- Spray foam around rim joist
- 95% AFUE natural gas boiler for existing radiators and domestic hot water
- Energy recovery ventilator (ERV)
- Whole-house air sealing

Retrofit detail



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