

# Net-Zero Energy Custom Home Whidbey Island, WA



STRUCTURAL INSULATED PANELS

BY INSULFOAM A CARLISLE Company



“Aside from the absence of any meaningful energy bills, we enjoy the constant even temperature throughout the house. It simply doesn’t fluctuate even when exterior doors are opened and closed.” - Homeowner



## Project Profile: Net-Zero Energy Custom Home

SIPS provided an airtight construction for this custom home located on Whidbey Island. Homeowners wanted to be able to build a net-zero energy home within a desired budget, SIPS were able to get them there. This home tested at 0.7ACH50 as well as helped the homeowner on projected energy cost savings of \$1,728 annually.

**WALLS.** 6.5” SIPS (R-25) with corrugated house wrap and fiber cement siding.

**ROOF/ATTIC.** 10.25” SIPS (R-40), two part polyiso spray foam to seal rim-joists and attic floor joists, composite roofing shingles.

**FOUNDATION.** Daylight-basement with 11.75” ICFs (F-23) extending 12” below slab base; 4” (R-20) rigid foam under entire floor slab.



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[www.premiersips.com](http://www.premiersips.com)



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**CERTIFICATIONS.** Certified to DOE's Zero Energy Ready Home Program, meeting all requirements of ENERGY STAR Certified Homes Version 3.0 and the U.S. Environmental Protection Agency's Indoor airPLUS as well as the hot water distribution requirements of the EPA's WaterSense program and the insulation requirements of the 2012 International Energy Conservation Code. Built Green Washington, Four Star

## GREEN BUILDING FEATURES

- Air-to-water heat pump (COP 4.1) for radiant floor heat, ventilation cooling
- Air-to-water heat pump (COP 4.5, HSPF 15.5)
- Windows- triple-pane, triple-low-e, argon fill, U=0.20 to 0.2; SHCG=0.22
- 100% LED lighting
- ENERGY STAR dishwasher, refrigerator, washer/dryer, ceiling fans
- 7.84-kw solar electric system, made in WA for incentives. 6-year payback due to state production credits
- All EPA WaterSense fixtures
- Yard is xeroscaped for zero irrigation
- No VOC paints, low VOC caulks and adhesives
- Electric car charging circuit in garage
- House is engineered to withstand a 8.0 magnitude earthquake



The high performance rigid insulation in the SIP walls and roof increase energy performance for the long term.



### The Premier SIPS Solution:

**ENERGY EFFICIENT & COST EFFECTIVE:** Reduce heating and cooling costs by 60% for significant operational savings, which can be directed back into the school's operational budget

**HEALTHY:** Superior indoor air quality with reduced infiltration of outside pollutants, which can benefit those with respiratory ailments

**COMFORTABLE:** Warmer in the winter, cooler in the summer, ideal controlled indoor environments for employees and clients

**EASY TO OPERATE:** Tight building envelope reduces HVAC mechanical equipment sizes and related heating and cooling over the life of each building

**ENVIRONMENTALLY RESPONSIBLE:** SIPs produce 30% less job-site waste than traditional construction

**LEED POINTS:** Up to 39 valuable environmental design credits can be awarded for use of Premier SIPs in commercial, new construction or major renovation

### Project Details

**Architect:** Zero-Energy Plans LLC

**Contractor:** CVH Inc., DBA Clifton View Homes

**Project Size:** 6,711 Sq. Ft., Single Story

**Premier SIPS Used:** 6.5" Walls, 10.25" Roof

