

EICHLER GREEN

LEED-H, Registered Project
Goal: Platinum

Renewable Energy

48 - 175 watt photovoltaic solar panels (8.4 kWh) to be a net generator of electricity

3,000 ft ground loop in 25 concrete shoring piers for water-to-water geothermal heat exchange (both heating and cooling)

Indoor Air Quality

Displacement air ventilation with low-velocity, continuous, filtered external air

Central vacuum with external exhaust and exhaust fan in garage

Polished concrete floor for enhanced indoor air quality, low maintenance and durability

Sustainable

FSC-certified lumber and exposed beams are reclaimed locally

70% slag in all concrete and 50% slag in all shotcrete

Locally-manufactured hollow core concrete panels

Exposed fascia is natural zinc for durability and low maintenance

Overall

Net zero energy, zero carbon (no combustion inside the house)

Exceeds Title 24 by 72.9% (highest in the State of California)

Deconstructed original house and reused 100% of original Redwood 2x6 roof decking and 4x Douglas Fir beams

Maintained original footprint and added 18 sq ft to reduce the external surface area to almost a perfect square (4,730 sq ft of conditioned space)



Water

Harvest 100% of rainwater from the roof and store it in a 3,677 gallon underground cistern (made with recycled plastic) for irrigating drought-tolerant native California plants

100% of hardscape runoff goes to the cistern or to permeable landscaping

Dual flush toilets and low-flow water fixtures

Automated swimming pool cover to reduce evaporation and reduce heating requirements

Integrated Design

Natural daylighting throughout the house to reduce lighting requirements

Deep roof overhangs for solar shading except in the Winter months

White, reflective 'cool roof' to reduce solar gain and light-colored hardscape to reduce heat island effects

Operable clerestory windows for cross-ventilation with prevailing winds

SIP roof (R-47) and SIP wall (R-24) to reduce heating/cooling requirements

Expanded existing wall cavity from 2x4 to 2x6 for additional insulation (closed cell natural soy foam)

High performance windows (dual pane, low-emissivity, argon-filled)

1.5 million pounds of insulated thermal mass inside the house (R-10 under the 20-inch concrete mat slab made with 70% slag)