

Future Proof 08

Hadley, Massachusetts

Traditional looking in almost every respect, this home's building science is way ahead of the curve. The builder paid close attention to air infiltration, taping plywood seams and tweaking the envelope at regular intervals.



Good building science earned this contemporary net-zero home an outstanding HERS rating of -27.

PROJECT TEAM
Builder
Wright Builders, Inc. (WBI)
Northampton, MA
Architect
Bruce Coldham Coldham and Hartman Architects
Amherst, MA
Photos
Ned Gray Photography

“From the outset, we designed this house to maximize south facing roof space,” notes architect Bruce Coldham. “We modeled the site digitally, and look at trees and sun angles. From the get-go full on solar power was the first priority.”
Wright Builders of Northampton, Mass., framed the house with double 2” x 4” walls, a decision influenced by Building America’s years of research on wall efficiency. Coldham says most of the homes his firm designs now—even affordable ones—are framed this way, with either double 4” studs or with 2” x 6” studs that have a

layer of rigid foam acting as a thermal break on the home’s exterior.
This house is exceptional by any standards, in part because the team conducted blower door tests at intervals during construction, using a theatrical smoke machine to help pinpoint unwanted air infiltration.
“Buildings are gonna last a long time,” notes Coldham. “But if you build like this you don’t have to try to predict when energy costs will rise. You’ve already sealed the envelope completely. That way when costs do rise—which is inevitable—these owners will be ready.” **GB**

With 22kW of power on the roof, this home is future-ready, with enough juice to help power an electric car.

Interiors feature locally harvested wood floors, low-VOC finishes and paints, Energy Star-rated appliances and a “debarked” tree from the site as a centerpiece.



JUDGES' COMMENTS

“This house epitomizes a classic New England new home, but incorporates very good insulation choices, plus the exceptional addition of a significant PV array.”

PRODUCTS

Structure	double 2” x 4” frame
Countertops	Eco by Cosentino
	(kitchen), Corian “Terra” (baths)
Faucets	Delta “Leland” (kitchen),
	Kohler “Fairfax” (baths)
Siding	James Hardie “HardiePlank”
Flooring	Armstrong “Marmorette,”
	local hardwood with Bona finish
HVAC	Mitsubishi “City Multi” (air source heat pump)
Ventilation	Venmar
Appliances	GE “Profile” (induction range),
	Bosch (DW, refrigerator)
Paints	Benjamin Moore “Eco Spec”
Roof	standing seam metal
Windows	Thermotech (fiberglass)
Water Heater	Stiebel Eltron (heat pump)
PV Panels	SunTech (21kW total)
PV Inverters	PowerOne, Fronius