

Patrice Bideau in Baden, France

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Patrice Bideau designed this new single-family residence in Baden, France. Photo: Armel Istin

When it became evident that the metal framed, concrete panel construction of an existing 1970s home would make it impossible for the building to comply with 2005 French regulations for energy efficiency and windproofing, architect Patrice Bideau designed a new low-energy house with a total annual energy consumption of 47 kilowatt-hours per square meter (4.4 kWh per square foot).

The new three-story home, located in Baden, France, features a wood and concrete structure, and was built on the highest point of the lot, restoring the original slope of the site. The lowest floor is built into the slope, while the middle "ground floor" accesses small terraces to the west and south.



Overview from southwest. Photo: Armel Istin

The third floor is tucked into the attic space of a steeply sloping roof. Two of the home's three massing elements have gable roofs pitched at 45 degrees, while the third features a 30-degree shed roof; the roofing material is schistose slate.

The middle floor contains the home's living spaces, including a dining space, with vaulted ceilings, under one half of the gable roof, open to adjacent to a mezzanine level one floor up.



Dining room seen from mezzanine. Photo: Armel Istin

The main facade faces southwest with a gable offering views over the Gulf of Morbihan, a small body of water that opens into the Bay of Biscay. The primary cladding is a wood shiplap painted gray, a requirement of the local planning authority.

Wall insulation is cellulose, while the roof uses 300-millimeter (12-inch) rock wool insulation. Special attention was paid to the air-tightness of the walls and ceilings. Exterior wooden screens roll on tracks to shade the large sliding glass doors on the home's south-facing walls.

The home's primary heating system is a 7kW wood-burning stove. Heat transfer fluid-filled radiators provide back-up heating in the house.



View from mezzanine looking toward western balcony. Photo: Armel Istin

Project Details

- **Architect:** Patrice Bideau
- **Location:** Baden, Morbihan, France
- **Stories:** 3

- **Energy Use Intensity:** 47 kilowatt-hours per square meter per year (4.4 kWh per square foot per year)

Source: Architecture Week People & Places Blog