

CASE STUDY:

A LARGE HOME GETS A SMALLER FOOTPRINT

A luxury home approaches zero net energy use thanks to extensive efficiency improvements, renewable energy systems, and a “dashboard” for tracking energy and water consumption.

“A lot of our clients want to go green but very few mean it to the level and depth that Frank Levinson has taken this home.”

– COLLEEN MAHONEY, *architect*

Frank and Monika Levinson wanted a dashboard that told them the energy-saving performance of their house in real time. After completing an extensive remodel of their Tiburon home, the Levinson’s have just that – a resource monitoring system that displays information about their resource usage. These days, the resource monitor isn’t showing much waste, thanks to a major overhaul of the home’s energy-using systems and building envelope. The stunningly situated house, with sweeping views of the San Francisco Bay, was also updated with contemporary and green finishes, better lighting and changes to the floor plan to enhance flow and views.



ENERGY USE

Even after taking basic energy-saving steps like substantially improving insulation in walls, roof, and floor, adding double-paned windows, and using LED and fluorescent lighting, the Levinsons wanted to do more to ensure that most of their energy came from sustainable sources – so they had a photovoltaic system mounted on the garage roof. Gas furnaces were replaced with efficient dual-source (electric and gas) heat pumps and tightly sealed new ductwork.



PROJECT STATS

LOCATION: **Tiburon, CA**

GREENPOINT RATED SCORE: **128**

YEAR BUILT: **1971**

ORIGINAL SIZE: **5,500 square feet**
(Including a separate 2-bedroom apartment)

NEW SIZE: **5,500 square feet**
(Including a separate 2-bedroom apartment)

PROJECT SCOPE:
Whole house remodel to reduce the home’s carbon footprint and update it with contemporary design and green materials.

ARCHITECT/BUILDER:
Mahoney Architects and Interior
Larwood Construction

GREENPOINT RATER AND GREEN
BUILDING CONSULTANT: **Kevin Beck**

WHOLE HOUSE LABEL



A solar hot water system serves the main house, the apartment and an endless pool, with a gas water heater providing supplemental domestic hot water during cloudy spells.

The Levinsons now use 90 percent less gas than they previously used, and are making more electricity than they consume.



Rooftop solar PV and solar water.



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INDOOR AIR QUALITY

Throughout the interior, Mahoney specified healthier finishes, including low-VOC paints and natural stucco. Other healthy home features include high efficiency HVAC filters, bathroom and kitchen exhaust fans vented to the outside to remove moisture and odors, and insulation that gives off few or no indoor air pollutants compared to conventional insulation.



FSC certified maple flooring.



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RESOURCE CONSERVATION

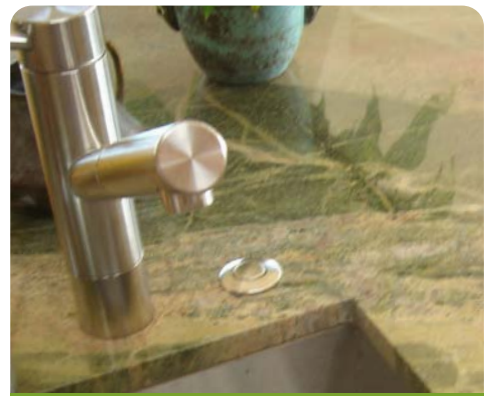
The Levinsons prioritized durability in their choice of materials. Their classic maple floors will stand the test of time, and have been certified by the Forest Stewardship Council to have come from sustainably managed forests. The new exterior cedar siding, as well as cabinets, new interior doors and the entry door are also FSC certified.



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WATER CONSERVATION

Underneath the house, Levinson had two 7,500 gallon cisterns built to collect rainwater for landscape irrigation. To further reduce water use in and around their home, the Levinsons selected dual-flush toilets, an on-demand recirculation pump that reduces the time it takes for water to reach fixtures, and drought-tolerant plants for the gardens.



High performing faucets use less water.



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COMMUNITY & LIVING GREEN

The home has a number of design elements that accommodate diverse households, including a fully functional independent apartment and accessibility features such as a main floor with a zero-step entrance, doors and passageways with at least 32 inches of clear passage space, and bathrooms with blocking for grab bars. The home is within walking distance of public transit and neighborhood services.