



Collaborating for a Better Community in Flathead County, Montana

Habitat for Humanity of Flathead Valley has a history of building homes to high efficiency standards. Participating in BetterBuiltNW's Next Step Home Pilot program helped them take their homes to the next level of efficiency and form a stronger partnership with Flathead Electric Cooperative.

The Perfect Next Step

Habitat for Humanity's mission is to eliminate substandard housing. In a climate like Flathead County's in Montana, where winters feature below-freezing temperatures for several months and summers get hot, this means making sure the homes they build stay comfortable. Habitat for Humanity embraced efficient building practices as a way to reduce energy bills for their families, who earn 30%–60% of the median income in the area.

Asking Habitat for Humanity to participate in the Next Step Home Pilot was a no-brainer for Flathead Electric Co-op Energy Services Representative David Bopp. "They were already at approximately 90% of the Next Step Home standard," said David.

Habitat for Humanity jumped at the opportunity to go beyond their already rigorous building practices and prove that you can make a highly efficient home in cold weather climates – even with an all-volunteer crew.

Building on Efficient Foundations

Steve Tartaglino, Construction Site Supervisor for Habitat for Humanity, was the perfect person to spearhead this project.

After 20 years in construction, Steve was considering a teaching career when he learned that Habitat for Humanity had an opening. "I thought about the reasons I was looking into teaching and I thought this might be a good fit," he said. Steve improved upon Habitat for Humanity's already progressive building practices, teaching volunteers along the way.

COLLABORATORS

Habitat for Humanity of Flathead Valley
Flathead Electric Cooperative

LOCATION

Columbia Falls, Montana

HOME FEATURES

R-30 super insulated walls
Heated with one high-efficiency ductless heat pump
Heat recovery ventilation (HRV) provides fresh air throughout home
Drain water heat recovery
1,213 sq. ft.

UTILITY REBATES

\$2,000

ESTIMATED HEATING/COOLING ENERGY SAVINGS

7,562 kWh per year

ESTIMATED HEATING/COOLING COST SAVINGS

\$794 per year

ENERGY USE INTENSITY

24.9 KBTU per
sq. ft. per year

“In my mind, it’s not that difficult to obtain some pretty good goals in terms of using less energy without sacrificing any comfort or quality of living.”

STEVE TARTAGLINO,
CONSTRUCTION SITE
SUPERVISOR, HABITAT
FOR HUMANITY OF
FLATHEAD VALLEY



So far, he’s built 21 homes with them. He started collaborating with David right away. “I realized he could be a wealth of information, allowing us to fine-tune our methods and get better results,” said Steve. The Next Step Home Pilot allowed them to take their partnership, and building practices, even further.

The Value of BetterBuiltNW

Through their Next Step Home Pilot program, BetterBuiltNW provided technical training, offered design and field commissioning services, helped coordinate the installation of efficiency features, and assisted in monitoring the home post-construction. The home’s energy performance evaluation provided Habitat for Humanity with information they could use to promote their energy-efficient building practices.

They also found value in learning about the best ways to achieve a higher level of energy savings. “It’s the subtle little things that turn a good energy-efficient home into a great energy-efficient home,” said Steve.

Things like recapturing heat from ventilation air and wastewater, as it leaves the home for reuse, improves indoor air quality and accurately tests a home’s performance to make sure everything is working the way it should.

A Product That’s Second to None

Combining these techniques into one house makes for a great home. The duplex they built is efficient and comfortable, and it will keep the occupants warm throughout the long Montana winter.

The families moving into this home can now expect their heating costs to be around \$20 a month, which means Habitat for Humanity is putting about \$66 back into their monthly budget.

“When you get a family with a tight budget, to do that for them is incredibly rewarding,” Steve said.

Building a Better Community, One Home at a Time

For David, the home is also a great case for more efficient building practices in Flathead Electric Co-op territory. Because of the growing population, encouraging efficient new construction is a main part of David’s job.

“We want to ensure that the building infrastructure will be well-done, well-built and there to serve generations. And at the same time, we can offset the need for new electric supply to meet future load growth,” he said.

Flathead Electric Co-op provided \$2,000 in rebates to help Habitat for Humanity install an efficient ductless heating and cooling system and upgrade the building shell on the Pilot home. David is evaluating the ability of local resources to support a performance-based new-construction program so he can reward builders like Habitat for Humanity when they go above and beyond the standard incentive requirements.

He also has a message for builders who haven’t tried efficient building practices: “You can do it, and you can do it in colder climates than you might find along the I-5 corridor.”

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