

HIGH STANDARDS FOR RESIDENTIAL CONSTRUCTION HAS ENERGY-EFFICIENT OUTCOMES



[TC Legend Homes](#) in Bellingham, Washington, made a name for itself by consistently delivering energy-efficient, sustainably built homes with low carbon footprints that customers love. Co-owner and founder, Ted Clifton, strives to set the standard for net-zero construction and inspire other builders to improve their own strategies in the process.

TC Legend uses field-tested and easily repeatable methods to meet energy-efficiency performance standards for residential construction. These standards, which vary by state, are ever-evolving, but TC Legend's consistent dedication to quality and efficiency enables them to build on their past successes.

The energy-efficient design features TC Legend employs—combined with onsite renewable energy in the form of rooftop solar—result in builds that produce more energy than they consume. TC Legend takes their commitment to the environment a step further by purchasing carbon credits to offset the carbon dioxide emissions of their projects. Clifton expects the entire business, from the company itself to the homes they build, to be carbon neutral in the near future.

TC Legend's focus on sustainability helps them "push the envelope with each project," Clifton said. This appetite to constantly improve and produce energy savings greatly influences the guiding principles that help prepare the business for the challenges of tomorrow, whether they be climate, cost, or code-related.

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- Ted Clifton, TC
Legend Homes

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CONSIDER EVERY PROJECT A LEARNING EXPERIENCE

Although Clifton started the business in 2006, it wasn't until 2011 that TC Legend was hired to build their first [zero energy](#) home. The build came at a time when Clifton, who saw firsthand how expensive and wasteful typical new construction could be, was reconsidering what types of projects he wanted to work on and what niche TC Legend could fill. "I had recently done a fancy custom remodel project with a client who kept deciding they wanted it done differently," he said. "All this great work would get torn out, and we'd have to do it over."

TC Legend's first zero energy home project was the first of its kind in Seattle. It gave them the chance to "carve out all the unnecessary stuff that was making modern houses unaffordable," Clifton said. After TC Legend completed this and a few other zero energy homes, the business pivoted to these types of projects exclusively. "There were plenty of others out there building code-minimum houses and luxury houses," he said.

As TC Legend built more zero energy homes, word began to spread. Potential customers came to them with questions about the benefits of homes that generate their own energy and fellow builders started asking how they could build more efficiently. Ever eager to share what he learned, Clifton often answered the same way to both audiences: "Keep the design simple."

NOT ALL HOME DESIGNS ACHIEVE THE SAME LEVEL OF EFFICIENCY

While Clifton's tip on how to build efficient homes may seem obvious, it's the basis that allows a home to achieve superior efficiency. "Don't be afraid to experiment and do something different," he said. "Just don't make things harder for yourself by choosing a complicated house shape." Homes that aren't rectangular are more difficult to condition, so he recommends sticking to traditional shapes.

Clifton says energy modeling will help builders determine how their designs can meet code requirements and reveal how to get the best energy efficiency for the dollar. "Sometimes it's adding insulation, sometimes it's using a better window, and sometimes it's a better heat pump," he said. "But you need a balance, and that's where energy modeling comes in."

Energy modeling also helped Clifton understand the impact that maximizing airtightness has on a home's energy efficiency. This inspired the business to begin fine-tuning their whole-house ventilation strategy.

TC Legend Homes built their first zero energy home in 2011 in Seattle, and has built more than 20 since.



HIGH-EFFICIENCY GOALS CAN HELP BUILDERS IDENTIFY WHAT TO ADAPT

While researching home certification programs, Clifton learned about [Indoor airPLUS](#) from the U.S. Environmental Protection Agency (EPA), which is best described as a supplementary certification to the [ENERGY STAR® Residential New Construction program](#). Attaining both certifications can better prepare builders to produce homes with features that help reduce airborne pollutants and contaminants that contribute to poor indoor air quality.

Clifton admits there is an added challenge with tightly sealed homes. “When you make a home with a tighter envelope, you need a good ventilation system because [indoor] air quality will quickly get bad without one,” he said. Depending on the home, TC Legend typically installs a heat recovery ventilation or balanced ventilation system and includes HEPA filtration to ensure all incoming air is clean. “That way, it doesn’t matter what the outdoor air quality is,” Clifton explained, nodding to the negative environmental impact wildfire smoke has in the Northwest.

Clifton investigated the [Indoor airPLUS label requirements](#) and was surprised to learn his homes already qualified. Soon after, TC Legend became an Indoor airPLUS Partner to promote its commitment to maintaining a high standard for indoor air quality and energy efficiency.

LOW-COST EQUIPMENT CAN PROVIDE BIG ENERGY SAVINGS

TC Legend pays close attention to the amount of energy required to power all the equipment in their homes to ensure the solar energy they generate is enough on its own, often thinking outside the box to find the right solution. For example, they install variable speed fans with silencers in range hoods—which aren’t conventionally used for this purpose—because they are cost effective and use significantly less power compared to traditional types. Clifton believes having a virtually silent fan encourages people to use their range hood to maintain good air quality while cooking.

Innovative design choices like this are one reason TC Legend was recognized by the EPA at the [2023 Indoor airPLUS Leader Awards](#). The award winners, which included builders and Raters, are market-leading Indoor airPLUS Partners who offer outstanding indoor air quality protections for buyers of new homes. Clifton credits TC Legend’s achievement to their courage to try new things. “One of the most important things a builder can do in this industry is be willing to change,” he said. “If a small construction company from Bellingham can do it, the rest of the country can, too.”



Two net-zero energy homes featuring structural insulated panels and triple-pane windows.



Air-to-water heat pump systems provide heating, cooling, and domestic hot water more efficiently than typical electric resistance systems.

LEARN NEW METHODS TO PREPARE FOR THE FUTURE

Energy efficiency is no longer an added bonus for customers looking for a newly built home; it's a baseline expectation. New products and construction materials hitting the market help make considering alternatives to traditional methods and saving energy easier. "The building industry can be so resistant to change," said Clifton. "But there are different, more advanced techniques people have developed with great results."

As consumer needs shift, change becomes necessary to stay competitive. Clifton wants TC Legend to be an example of what growth can look like for other builders. "It's not like there's some special proprietary knowledge we have siloed," he said. "We use particular techniques and will tell anybody exactly what they are."

Clifton suggests builders not try to reinvent the wheel on their own. "There's plenty of case studies on highly efficient homes that tell you what heating equipment was used, the envelope type, and what they made the roof of," he said. "Learn which techniques resonate with you. Don't be afraid to copy someone who's doing a good job."



Homes with traditional shapes, like rectangles, are simpler to condition than those with more complicated ones.



Insulated concrete foundations provide a well-insulated perimeter and require less labor than traditional forming.

Explore the [BetterBuiltNW.com resources page](#) to [access training videos](#) and gain knowledge that can help your business build more efficient homes.