

6 STEPS TO BUILD A "ZERO ENERGY READY HOME"

How Habitat for Humanity of Summit and Wasatch Counties is building homes of the future today!



1

COMMIT TO ZERO!

A Zero Energy Ready Home is a high performance home which is so energy efficient, that a renewable energy system can offset all or most of its annual energy consumption. The first step is to commit!



2

DESIGN & ENERGY ANALYSIS

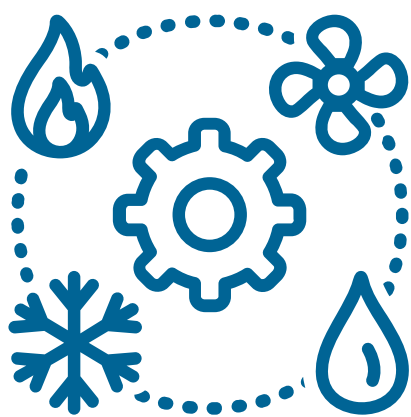
Smart design in tandem with energy analysis is vital. During design, a home's energy needs should be estimated using energy modeling software to ensure that the goal of Zero Energy Ready can be achieved.



3

INSULATION & AIRTIGHT CONSTRUCTION

Sealing and insulating a home are the two most important and impactful measure builders can take to improve the energy efficiency of a home to make it Zero Energy Ready.



4

HEAT & COOL EFFICIENTLY

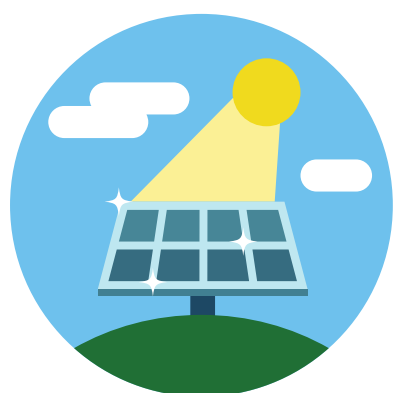
Highly energy efficient heating and cooling systems are also essential to reduce energy needs and get to Zero Energy Ready. Heating and cooling systems need to be designed specifically for your new, energy efficient home.



5

ENERGY STAR APPLIANCES & LEDS

Appliances can account for up to 60% of a home's energy load, which is why ENERGY STAR appliances and LEDs go hand-in-hand with Zero Energy Ready homes.



6

SOLAR READY CHECKLIST

For the energy a home still needs, be ready to power it with the sun. Follow the PV-Ready Checklist to make sure the home is designed for rooftop solar to be installed during the construction process or at a later date.

STEPS TO A "ZERO ENERGY READY HOME"

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STEP #1: ENERGY MODELING



1 WHAT IS ENERGY MODELING?

Energy modeling software helps builders identify strategies to build a Zero Energy Ready Home and also estimates the long term operational savings for the occupants. The results impact the design and operation of the building to achieve maximum energy savings.



2 START DURING DESIGN

It is crucial that energy modeling begin as soon as the architect creates preliminary designs with dimensions, elevations, floor plan, and windows and doors. When energy modeling is incorporated early into the design process, the results can help inform decisions, like insulation values and the selection of heating and cooling systems.



3 COMPARE AND CONTRAST OPTIONS

The energy modeling process allows you to compare the energy impact of different design choices. Variations in roof direction, window placement and insulation options can be easily changed in the design phase to optimize energy savings.



4 MINOR CHANGES MAKE BIG ENERGY SAVINGS

Energy modeling often identifies numerous small changes to specific building elements including air sealing, heating and cooling systems, insulation and window selection. Utilizing a modeling tool allows you to leverage a suite of elements that when combined, result in a cost-effective, Zero Energy Ready Home.



5 SWIFT RETURN ON INVESTMENT

Energy modeling has some of the best payback times in the business, often within a few months. The cost for energy modeling varies depending on the software and or company you choose.

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