# STEPS TO A "ZERO ENERGY READY HOME"

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

## STEP #3: HEAT & COOL EFFICIENTLY



### **CHOOSE CAREFULLY**

The choices you make for heating a cooling will make or break your ability to achieve Zero Energy Ready. Heating and cooling generally make up slightly over half of residential energy use, so choosing an energy efficient heating and cooling system can pay back in a big way.

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#### DON'T OVERSIZE

Heating and cooling systems must be "sized" correctly by completing a Manual J load calculation. Over-sizing heating and cooling systems is a common mistake that should be avoided as over-sizing turns the system on and off much too frequently, creating needless wear and tear and increasing utility bills.

# Air Source Heat Pump

## **AIR-SOURCE HEAT PUMPS**

Unlike a gas furnace or electric resistance heater which both create heat, an air-source heat pump simply **transfers** heat from outside to inside a building, or vice versa, and are the most energy efficient option out there. These units can be powered by clean, renewable electricity from the utility or from a rooftop solar array, creating zero-emission heating!





Go a step further with the use of ductless air-source heat pumps (sometimes referred to as "mini-splits"). These units require no duct work, making them ultra-energy efficient by avoiding possible air duct leaks. An outdoor heat pump unit delivers heat and cooling to an inside unit (often called a "head") that hangs on a wall, but can be located in ceilings or floor-mounted.

### **OPTIONS FOR ZONES**

Air source heat pumps come in different configurations: Single-zone systems where one outdoor unit connects to one indoor unit and multi-zone systems, where one outdoor unit can connect to multiple indoor units. For smaller homes, only one indoor unit may be needed to provide heating and cooling. For two-story homes or larger homes consider using a multi-zone system.



### WARM AND COLD CONSIDERATIONS

For homes in colder climates, be sure to select a "cold climate" rated heat pump. When sized properly, they work seamlessly even when the temperatures are -10° F or below! On the flip side, high SEER mini-splits cool much more efficiently and are more quiet than standard air conditioners.



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