

Red Hawk **NetZero** Home



A Red Hawk **NetZero** home is not just a “green home” or a home with solar panels. It combines advanced design and superior building systems with energy efficiency and an on-site solar array to produce a better home. Red Hawk **NetZero** homes are ultra-comfortable, healthy, quiet, sustainable homes that are affordable to live in.

All exterior framing of a Red Hawk home is of 2x6 construction and is wrapped with an airtight barrier to virtually eliminate outside air from entering the home through the walls and the insulation is BASF Open Cell Polyurethane Spray Foam.

Red Hawk energy conservation features: **Included** and **Upgrades**:

- **Included** – Tyvek exterior wrap and BASF Open Cell Polyurethane Spray Foam insulation in all exterior walls and under the roof of living space. Insulated Windows and Doors, Energy Efficient Appliances, LED Lighting, Deako Simple Switch Boxes throughout and all homes are EV and Solar Array Ready
- **Upgrades** – BASF Open Cell Polyurethane Spray Foam insulation in garage walls and under the roof of garage. Mitsubishi Mini-Split HVAC, Rheem Hybrid Water Heater, Electric Vehicle Circuit, Deako Smart Lighting energy management and a Solar Array to provide a NetZero electric bill.

Many conservation features are **Included** to the Red Hawk homes. You can choose to add the **NetZero upgrade** to any Red Hawk home.

- **Insulation** – BASF Open Cell Polyurethane Spray Foam insulation in all exterior walls including garage and under the roof
- **Heating and Cooling System** – Highly-efficient, cost-effective, heating and cooling systems are essential to meeting the **NetZero** energy goal. The Mitsubishi air source ductless mini-split heat pump is the answer. Each room is individually heated and cooled. These systems are highly energy efficient and not have the shortcomings of central, forced-air systems or the high costs of thermal heat pumps.
- **Hybrid Water Heating** – Water heating is the second largest energy expense in a zero-energy home after heating and cooling. The Red Hawk **NetZero** upgrade includes the Rheem 65-gallon Hybrid Water Heater which provides heated water at 40% of the cost of traditional water heating. Also included in the water heating upgrade is on demand Bluetooth button in the Master Bedroom and Kitchen to activate the hot water recirculation system. Push the button and hot water is delivered to the Red Hawk **NetZero** home in just 3 minutes.... Hot water on demand!
- **Windows and Doors** – Well insulated windows and doors are the third most cost-effective strategy for making a home energy efficient. All Red Hawk homes come **Included** with dual pane argon gas filled insulated windows and patio doors.
- **Energy Efficient Lighting** – LED lights are **Included** in a Red Hawk home. LEDs are energy efficient and last many years longer than other lighting options. LEDs meet a variety of lighting needs from very bright white light to soft, warm light. Selecting the right LED lights for the task, locating lights strategically, and utilizing natural light can drastically reduce a home's energy use.
- **Deako Smart Lighting energy management** – The Deako Simple Switch is **Included** throughout a Red Hawk home. Every simple switch can be upgraded to **smart Deako inserts**. Make your home smarter to fit your evolving needs. All Deako Smart inserts are available at Amazon. Upgrade as you learn more about your lighting use habits.

- **Energy Efficient Appliances** – We recommend energy star KitchenAid energy efficient appliances
- **EV Ready** – The conduit is installed for an EV outlet. All that remains is to install the wiring for the **EV circuit**.
- **Solar Ready** – All Red Hawk homes are “solar ready” with pre-installed conduit routed to the best location for the solar array. The Red Hawk lots are a minimum of 2 acres and provide ample open space for a solar array. Avoid solar panels on the roof and avoid higher roof maintenance costs because roof panels must often be removed for roof maintenance.
- **Solar Panels** – Now for the final touch to achieve **NetZero**. Add solar array of Grid-tied solar photovoltaic (PV) panels that currently provide the most cost-effective form of renewable energy for the Red Hawk **NetZero** home. A solar array sized to offset the energy consumption of a Red Hawk home is the final step to a **NetZero** home. The solar array can power all the energy needs of a Red Hawk **NetZero** home including lighting, heating and cooling systems, appliances and hot water.



Clear skies and 350 days of Arizona Sunshine will energize your solar array and provide you the energy of the sun at no extra charge.



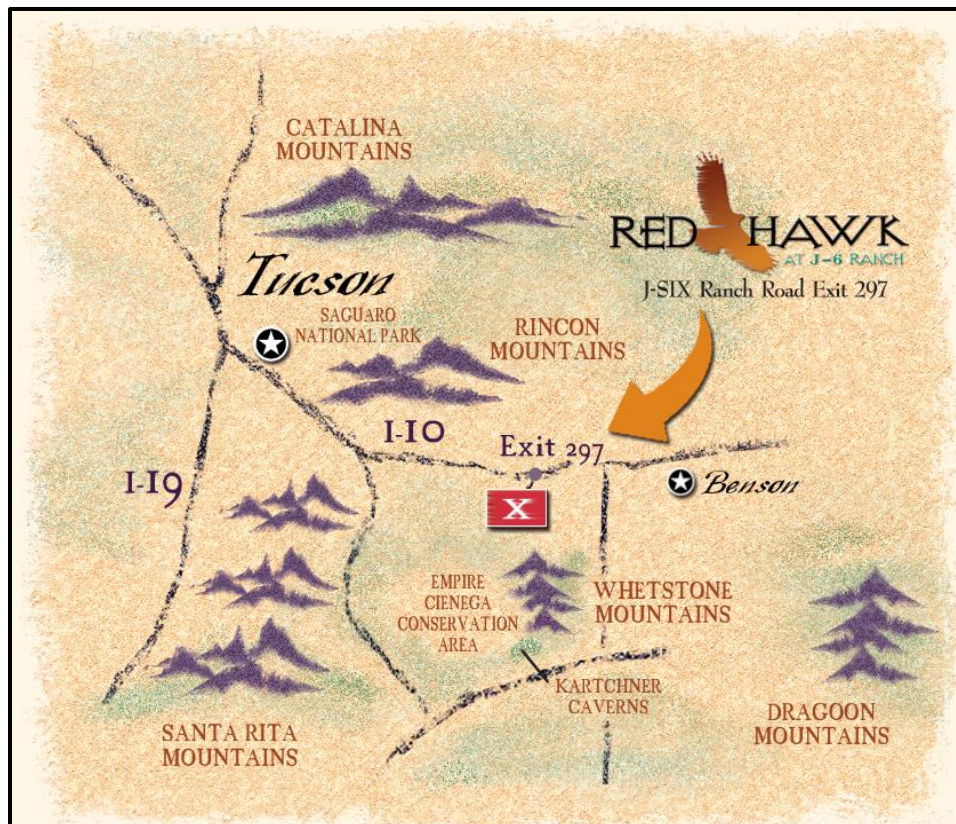
For peace of mind, all Red Hawk homes are **Energy Star** rated. A home energy rating involves an analysis of a home’s construction plans and specifications. Based on the home’s plans, the Home Energy rater uses an energy efficiency software package to perform an energy analysis of the home’s design.

This analysis yields a projected, pre-construction Energy Rating Index. Then, the energy rater conducts onsite inspections of the Red Hawk **NetZero** homes to assure the construction of the home meets the specifications defined in the construction plans. On site tests and inspections include a blower door test (to test the leakiness of the house) and an HVAC efficiency test. Results of these tests, along with inputs

derived from the plan review, are used to generate the Energy Rating Index score for the home.

The Energy Rating Index is a scoring system established by the Residential Energy Services Network (RESNET) in which a home built to the specifications of the Energy Rating Reference Home (based on the 2006 International Energy Conservation Code) scores an Energy Rating Index of 100, while a net zero energy home scores an Energy Rating Index of 0. The lower a home's Energy Rating Index, the more energy efficient it is in comparison to the Energy Rating Reference Home.

Each 1-point decrease in the Energy Rating Index corresponds to a 1% reduction in energy consumption compared to the Energy Rating Reference Home. Thus, a home with an Energy Rating Index of 85 is 15% more energy efficient than the Energy Rating Reference Home and a home with an Energy Rating Index of 60 is 40% more energy efficient.



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