

# The New American Home 2015

## Environmental Performance Profile



Photo courtesy of Trent Bell Photography

**THE NEW AMERICAN HOME**, is built to showcase the latest technology in the home building industry. Historically the approach has been to accomplish this through a “one of a kind” custom home that would provide the spaces and the price point to showcase such advanced products. For 2015, the home will demonstrate how the most cutting-edge building technology, products and materials can be integrated into a production community. As such, Blue Heron created as a production floor plan for the 2015 **THE NEW AMERICAN HOME** to be sold and built with various structural and finish options in the Sky Terrace new home community. It is a collection of ideas for the industry to take away — in large pieces, or bit-by bit — and put into millions of homes at any price point across the country. A comprehensive listing of the partners and products used in the project can be found online – [www.tnah.com](http://www.tnah.com).

This brochure provides an Environmental Performance Profile of TNAH. Its high performing design is extensive and comprehensive, as documented through the numerous third-party performance ratings the home has achieved – see complete list to the right.

## Key Energy Features

TNAH has achieved net-zero energy, which means that the total amount of energy used by the building is roughly equal to the amount of renewable energy created on the site. The home has achieved a HERS Index of -13. The home is designed to provide \$4,616 in annual energy savings over that of a code minimum home.

The most noteworthy energy efficiency features of TNAH include the air tightness of its thermal envelope and the use of solar energy for space conditioning. Under blower door testing, the thermal envelope achieves 4.81 air changes at 50 Pa, an amount that is considered very airtight. Spray foam material was used in the exterior walls, on the underside of the roof deck, as well as around any penetrations, and framing to prevent air leakage and to provide thermal insulation.

The home uses solar energy to power a portion of its electrical systems, space conditioning, and hot water systems. The 15KW Photovoltaic (PV) system will provide approximately 83% of the annual energy needs for the home. The home also features both Natural Gas and Electric car charging stations in the garage.

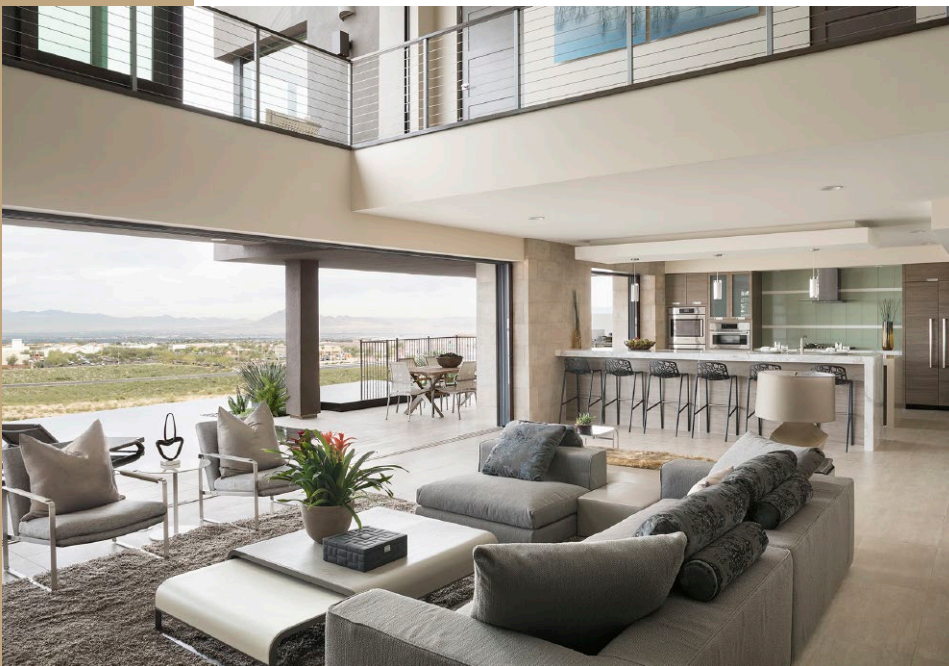


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## Performance Ratings

- **National Green Building Standard™ (NGBS)**  
Emerald level certification
- **U.S.Green Building Council LEED-H**  
Platinum
- **DOE**  
ENERGY STAR Certified New Home  
DOE Challenge Home
- **EPA**  
Indoor airPLUS
- **RESNET**  
HERS Index w solar -13
- **REGIONAL PROGRAMS**  
Southern Nevada Green Building Partnership  
Water Smart Home Program

## Lot Design

- Lot selected near existing community resources
- Driveways and parking aligned with natural topography
- Natural drainage features preserved & vegetative swales constructed to increase groundwater infiltration

## Resource Efficiency

- Additional green practices to account for large home
- Advanced framing, interior covering not requiring finishing, rainscreen wall design on exterior wall assemblies, roof overhangs, recycled-content materials, construction waste recycled, certified wood, engineered wood products, preassembled roof and floor trusses, indigenous materials, ISO 14001 registered materials

## Energy Efficiency

- Exterior walls insulated with spray foam to R-20
- Fully air-sealed and insulated attic
- Windows and patio doors with low-e coatings and argon gas fill (SHGC 0.17, U-value 0.39)
- Extended roof overhangs to aid in shading the home from the harsh Nevada sun
- ENERGY STAR rated roof to limit solar gains



- Light colored exterior wall finish
- Air tightness 4.81 air changes per hour @ 50 Pa
- Variable speed compressors in outdoor heat pump units
- All ductwork sealed for air tightness
- 100% of all interior and exterior lamps are energy-efficient LEED lighting, compact fluorescent lamps (CFLs) and linear fluorescent lamps (LFLs)
- ENERGY STAR®-rated appliances, including dishwasher, refrigerator, freezer, and clothes washer
- 15KW Solar Photovoltaic (PV) system
- Natural gas and electric car charging stations

### Water Efficiency

- Tankless water heater
- Water efficient fixtures
- ENERGY STAR water conserving appliances
- Drip irrigation system with smart evapotranspiration controllers

### Indoor Environmental Quality

- Energy-recovery ventilator (ERV)
- Ultra-violet light air treatment system improves indoor air quality
- MERV filters installed on central air system
- HVAC system with humidity controls
- Central vacuum system
- Power vented furnace and water heater
- Low and non-emitting products
- CO alarm monitor installed
- Automatic timer/humidistat devices installed in bathrooms
- ENERGY STAR exhaust fans

### Operation

- Homeowners' manual – including maintenance, equipment manuals, renewable energy options from utility, native landscaping and organic pest control options, termite inspection checklis



CONCEPTUAL FIRST FLOOR

FIRST FLOOR	2,948 Sq. Ft.
SECOND FLOOR	2,943 Sq. Ft.
TOTAL	5,891 Sq. Ft.



CONCEPTUAL SECOND FLOOR

FIRST FLOOR	2,948 Sq. Ft.
SECOND FLOOR	2,943 Sq. Ft.
TOTAL	5,891 Sq. Ft.



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## DESIGN BUILD TEAM

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## NATIONAL GREEN BUILDING STANDARD CERTIFICATION

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