

PROJECT DETAILS

PROJECT NAME	Toomey Residence
LOCATION	Paradise, CA
THERMAL ZONE	2
PROJECT TYPE	Manufactured Home
LAYOUT	2 bedrooms, 2 baths, 1 floor

PROJECT TEAM

OWNER	Rebecca Toomey
RETAILER	Statewide Homes
FACTORY	Champion Home Builders, Inc.
FACTORY LOCATION	Weiser, ID

PROJECT SUMMARY

Located in Paradise, California, this manufactured home was installed following the Camp Fire in November 2018.

The Advanced Energy Rebuild Program helped homeowner Rebecca Toomey to offset the cost of an energy efficient home made available through the ENERGY STAR certification. This home enrolled in the program under the Advanced Energy Home path and achieved an ENERGY STAR qualification by installing a variety of features that exceed the efficiency of the average manufactured home. This is a double-wide manufactured mixed fuel home, which means the residence receives both natural gas and electricity.

The home reserved a total of \$3,000 in incentives and will yield 328.25 kWh, 0.39 kW and 125 therms in annual energy savings. The owner elected to add R-40 ceiling insulation, R-21 wall insulation, and R-33 insulation in the crawlspace. These upgrades provided the homeowner with a comfortable and effective way to reduce energy costs and enhance the performance of the home's mechanical systems.



Figure 1. Street view of the original home in 2006



Figure 2. The new home completed in 2020

"I was very excited in making my new home in Paradise energy efficient. The AER program offset the cost for the energy efficiency upgrades. My new home is now energy efficient and the utility bills are much lower."

- Rebecca Toomey, Homeowner

Energy efficiency translates to better living for you.



Lower Energy Bills
Pay less and save more.



Increased Comfort
Reduced drafts with an improved building shell ensure comfort.



Healthier Air
Better air quality through reduction in toxic substances and safe temperature levels.

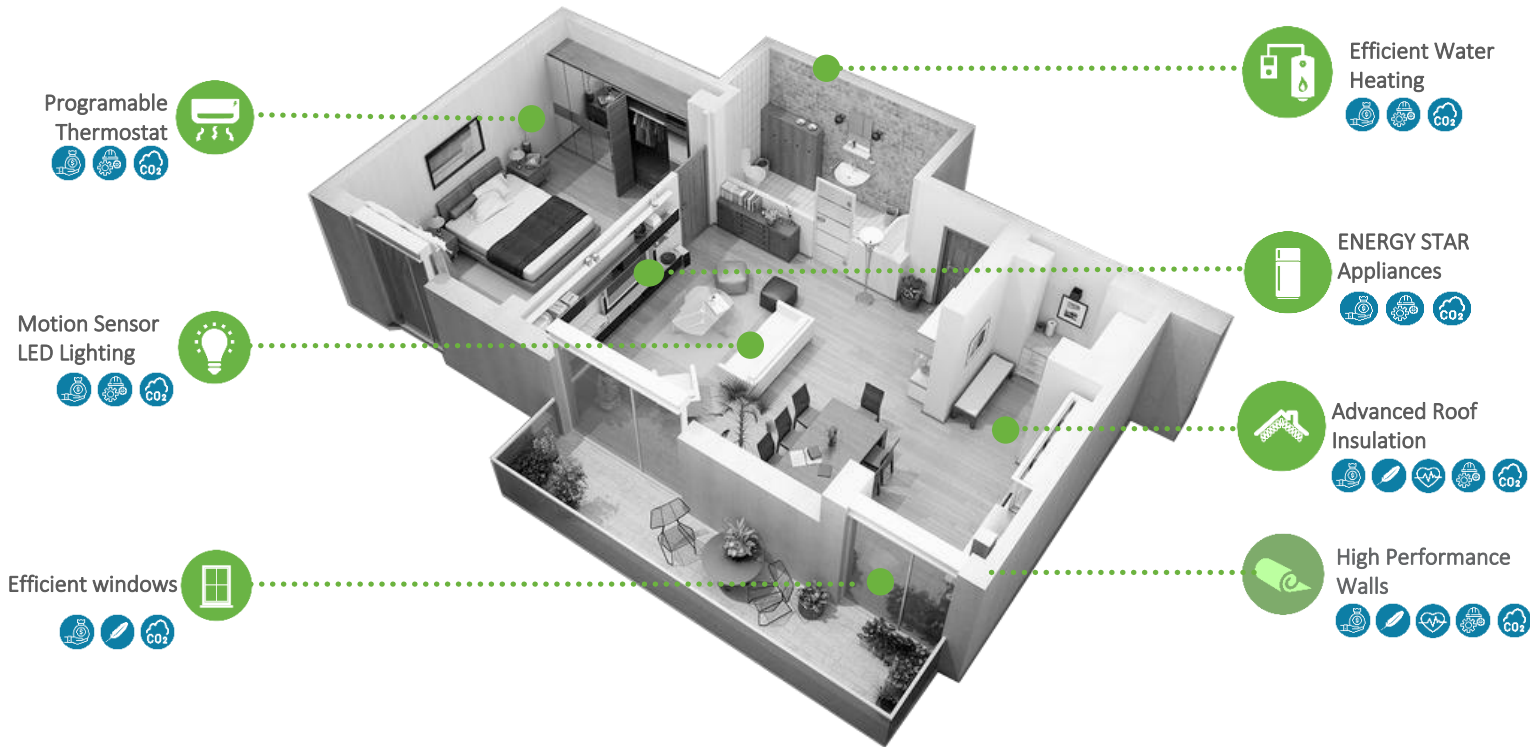


No Nuisances:
Less maintenance, repairs, noise, and odors.



A Better California
Lower your carbon footprint, for a better California.

ENERGY MEASURES IMPLEMENTED



This diagram does not reflect an actual apartment at this property and only depicts the energy efficiency measures implemented.



PROJECT SPECIFICATIONS

Building Envelope

Envelope Measure	HUD Standard Design	Proposed Design
Roof Insulation	R-22	R-40
Wall Insulation	R-11	R-21
Crawlspace Insulation	R-22	R-33
Window Specs (U-factor/ SHGC)	U-0.48 / S-0.32	U-0.35 / S-0.34



The home is designed with high-performance insulation in the walls and roof. This provides greater comfort by reducing the heating and cooling needs and the cost of energy for operation year around.

Mechanical Systems

Mechanical	HUD Standard Design	Proposed Design
HVAC Type	Split AC System	Split AC System
Cooling Efficiency	SEER 14 / EER 11.7	SEER 14 / EER 11.7
Heating Efficiency	AFUE .80	AFUE .80
Ducts	R-4	R-8
DHW	Gas Storage 0.62EF	Gas Storage 0.93EF



The air distribution in the house is facilitated by an R-8 duct insulation system, which reduces heat gain/loss when transporting conditioned air from the air handler unit to conditioned spaces and increases the efficiency of cooling/heating from the HVAC equipment.

Additional Features

Additional Features	HUD Standard Design	Proposed Design
Lights	Standard	Motion Sensor LED Lighting
Appliances	Standard	Energy Star Appliances
Thermostat	Non-Programable	Programable Thermostat



The addition of LED lighting and motion sensor switches in this home allow for a reduction in the electricity costs from efficient equipment and reduced run time through motion sensors.