

# TINY HOMES: REDUCING THE AMERICAN CARBON FOOTPRINT ON A LARGE SCALE

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<http://www.jetsongreen.com/2011/12/terrific-tiny-house-project-review.html>

## Abstract:

Since the year 1950, the size of the average American house has increased by two and one half times, from 1,000 Square Feet to 2,400 Square Feet. The drastic growth in housing size has led to increased spending and usage of utilities (natural gas, electricity, etc.), resulting in surges in the American carbon footprint. This research explores the potential for tiny homes to serve as a solution to the elusive idea of sustainable housing that is available to the average American homeowner, aiding in the size reduction of the American carbon footprint. Utilizing existing literature on the topic of tiny homes, this analysis explores the benefits and challenges of downsizing ones living space. Benefits include: reduced spending on household utilities, increased awareness in consumer purchases due to space limitations, greatly reduced or nonexistent payments, a greater social connection among families and a reduction in household carbon footprint. Although there are many benefits, issues with zoning law, families with children and expense of construction and development still need to be solved. Assuming that the homeowner can solve these problems, tiny homes appear to be an excellent answer to affordable, sustainable homes available to the average American family.



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## Research:

In order to explore the idea of tiny homes as a means to help reduce the American carbon footprint, I began by defining the household carbon footprint based upon the average usage of Natural Gas and Electricity in the American home (See Figure 1 and 2). I then researched the other benefits of tiny homes in order to fully understand the appeal of downsizing to a home that is only a fraction of the average 2400 square foot home. This research provided me with enough information to reach a conclusion. A tiny home includes any home under 1,000 square feet.

## Home Energy Sources

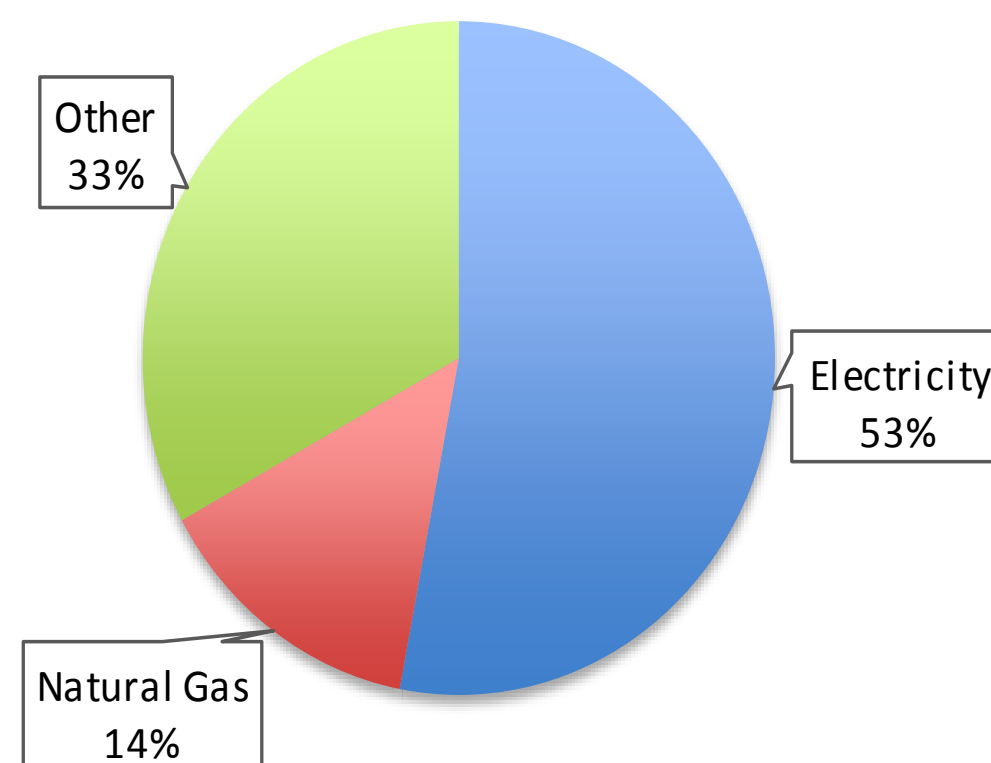


Figure 1) This graph displays the percentage of specific utility use within the household. Other includes: water, home construction and maintenance and other fuels (propane, heating oil, etc.).

## American Home Energy Use

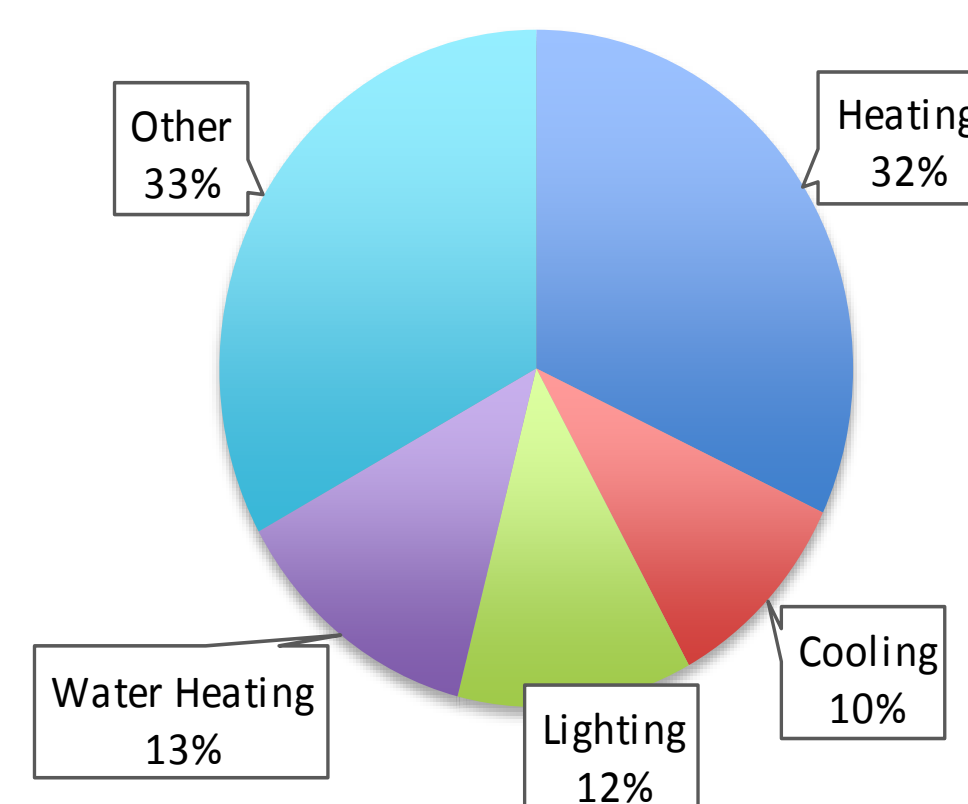


Figure 2) This graph displays the percentage of energy usage within the average American home.

## Big Names in Tiny Houses:

- Jay Shafer—Owner of Tumbleweed Tiny House Company (CA); Author.
- Brad Kittel—Owner of Texas Tiny Homes (TX)
- Sarah Susanka—Founder of the modern tiny house movement; Author.



This home, built by Texas Tiny Homes, utilizes recycled construction materials salvaged from deconstructed buildings.

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## Results:

Research on the usage of household utilities resulted in the discovery that many utilities are used heavily simply because a larger dwelling requires more power and heat for comfortable living. Other benefits of living in a tiny home include:

- Increased sense of accomplishment resulting from the ability to own and construct without going into debt.
- The ability to easily live off-the-grid with a smaller housing unit to provide energy for.
- Stronger familial bonds resulting from a closer proximity to one another.
- Decreased or eliminated debt resulting from increased financial stability/capability.

There are still some challenges to living in a tiny home including :

- Land Availability (Some states and cities have restrictions on housing size).
- Construction costs (Some can be expensive, but there are ways to navigate this issue).

Ultimately, tiny homes are a viable housing options that are available to the average American.

