

# The Hexayurt Refugee Shelter System



## What is it?

The Hexayurt is a refugee shelter system based on work done at the Rocky Mountain Institute. It uses an approach based on "autonomous building" to provide not just a shelter, but a comprehensive family support unit which includes drinking water purification, composting toilets, fuel-efficient stoves and solar electric lighting. Other systems can be added in a modular fashion.

## Projected Costs

Shelter: \$200 - \$500+ per single family unit depending on size, climate and use duration  
Infrastructure Package: around \$100 per adult

## Materials

Permanent use: Thermax HD (Dow)  
Temporary use: laminated hexacomb cardboard (Pregis)  
On site fabrication: Tuff R (Dow, widely used)

## Units

There are three shelter sizes, of which the middle size is shown.  
*Stretch* Around \$100 per unit, 6' high, 72 sq ft  
*8 foot* Around \$200 per unit, 8' high, 166 sq ft.  
*12 foot* Around \$300 per unit, 12' high, 166 sq ft. Resembles a space age cabin, full standing height throughout.

## Assembly

Units take a team of three people around an hour to assemble. They are assembled using a 6" wide, 600+lb bidirectional filament tape, and anchored to the ground like tents. No heavy lifting, ladders or scaffolding are required.

## Manufacture

Any wood shop or packaging factory can be taught to manufacture units in an afternoon. In emergencies, basic units can be manufactured on site with hand tools in half an hour each (only six cuts are required for each unit.)

## Infrastructure Package

1 Wood Gasification Stove (burns wood for cooking, 3x more efficient than clay stoves)  
2 Cold Cathode / LED Flashlights (energy efficient area lighting)  
1 Composting Toilet (model depends on location and we are still researching options)  
1 Water Purifier (type depends on location)  
Rechargeable AA batteries (for stove, lights, radios etc), for use in solar charging stations.

## Availability

The buildings have undergone extensive prototyping and are ready for mass manufacture.

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PS: the ball is a satellite dish from <http://www.gatr.com>