Going Off-Grid

Under certain conditions, a solar array, batteries and a generator may suffice for an intrepid homeowner to "cut the cord." But in many circumstances, a complex system of efficiency, generation and storage is needed to meet 24/7 demand. Below are several components of a self-sufficient home. It is not an exhaustive list, and all of these items would not necessarily be needed.

Small wind

Requires adequate space for turbine tower

Micro hydro

Nearby stream outfitted with a turbine

Rooftop solar

PV array sized to meet most demand and charge batteries

Outdoor furnace

Heat generated with wood outside and pumped indoors

Thermal envelope

Airtight and well-insulated to prevent heat/cold transfer



Wood stove

Generate heat without using electricity or gas

Home energy monitor

24/7 visibility into home's energy generation and use



Gas devices to minimize electricity demand

Energy storage

Powers home when solar/wind/hydro are insufficient

Solar water heater

Highly efficient units greatly reduce electricity use

Geothermal heat pump

Earth's steady temperature used to heat and cool



Backup generator

Emergency power source



On-site fuel for generator and gas appliances