



**Providing Village Energy Solutions
with Micro Utilities
& Renewable Energy**

**Warren Stokes
Director of Marketing & Sales
Heart Transverter, S.A.**

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Background

Heart products have been in continuous service for over 23 years in residential solar, transportation, telecom and back-up power.

We created the original high efficiency inverter for solar and transportation markets - Heart Interface.

The Transverter represents the next generation of inverter technology.

Current Markets served include: Smart Grid, Micro Utility, renewable Energy and UPS.



The Problem

We have passed Peak Oil.

News Watch

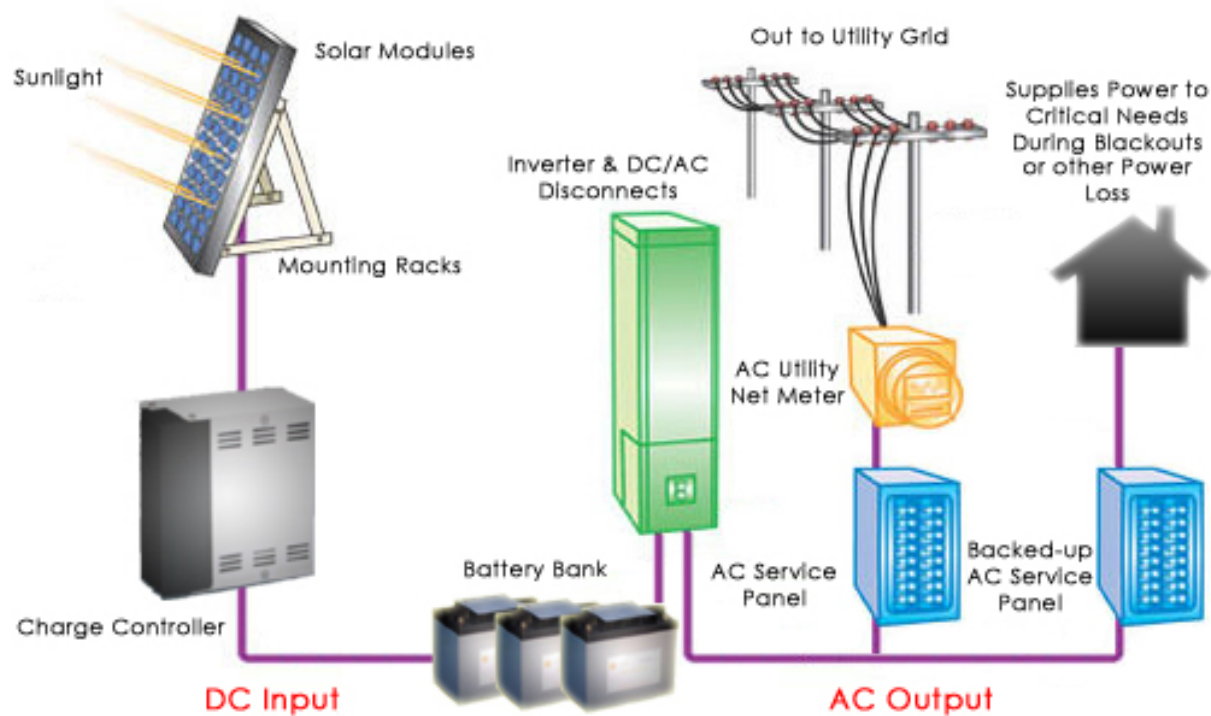


The World has Passed Peak Oil, says Top Economist

Posted by [Mason Inman](#) of [The Nicholas Institute for Environmental Policy Solutions, Duke University](#) May 5, 2011  [Comments \(24\)](#)

The Solution....

Renewable Energy





The Next Problem is already here.

If Renewable Energy Exceeds 15% of Grid Capacity the Grid becomes highly unstable and could collapse.

One of the bottlenecks in renewable energy production is the electric grid, argued another [recent report](#), this one by the World Resources Institute. Idaho's power grid, for example, could soon be overloaded by electricity from wind turbines, so the state's Public Utilities Commission has [suspended permits for all but fairly small turbines](#), cutting the largest allowable turbine 100-fold, from 10 megawatts down to 100 kilowatts.

One Solution is Networked Energy Storage & Micro Utilities

Transverter

- Bidirectional Inverter
- Uninterruptible Power
- DC – DC Converter
- Solar Charge Control

Energy Management

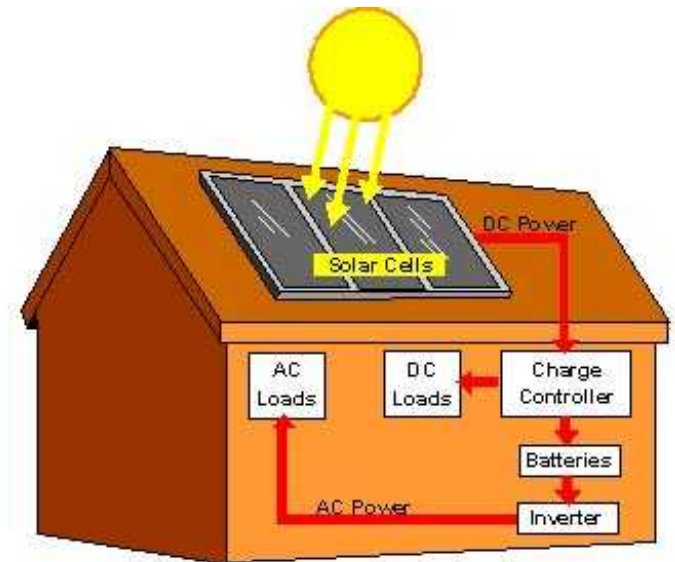
- Demand Response
- Load Management
- Data Logging
- Power Analysis

Micro Utility

- Energy Computer [™]
- Energy Storage
- Energy Operator System
- Energy Modeling Software

Home as a Micro Utility

- Energy Production
- Energy Storage
- Power Conversion
- Communications Network

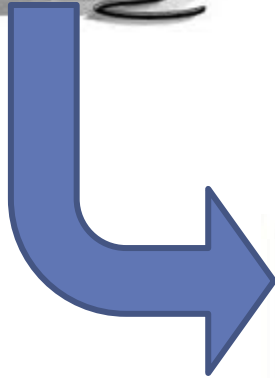


Micro Grid

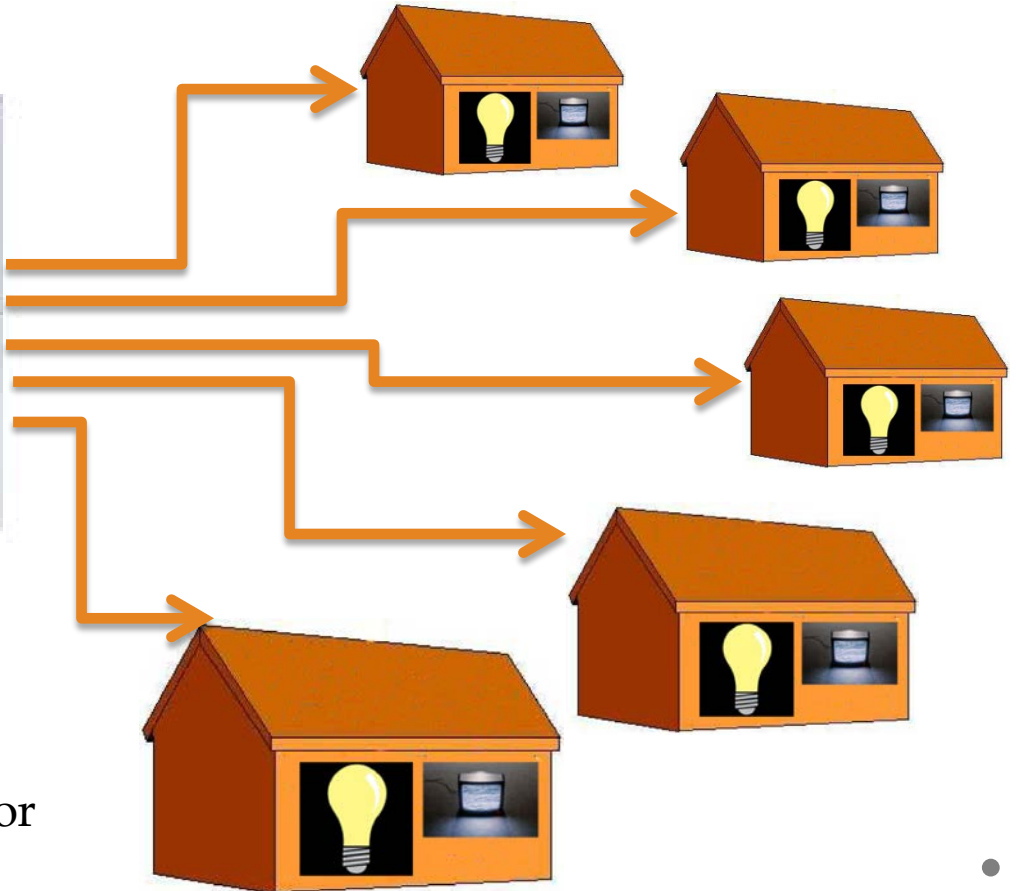
A Network of
Micro Utilities



Village Micro Grid



The Micro Grid
Owner - Operator





Resources

Heart Transverter www.transverter.com

Growing Energy Labs Inc. www.GELI.net

HOMER Energy www.homerenergy.com

