Where To Start With Renewables

Steps For A Cost-effective System

1 Minimise The Electrical Energy Requirement

* Minimise heating losses
* Optimise appliance efficiency
* Use solar for passive space heating, water heating
* Store energy in water, concrete, brickwork

2 Choose Your Storage Method For Green Energy

OFF GRID
Independent Power, RAPS

* Energy stored in batteries
* No connection to an electricity grid
* Heating & cooking loads supplied by woodburner/wetback, gas, genset
* Power storage usually in low voltage batteries
* Greater system complexity
* More equipment
* Cost/benefit long-term and predictable

GRID TIE
On Grid, Power Sell Back

* Energy stored in the national grid
* Power purchased from utility in the normal way
* Green power sold back during excess on-site generation
* Power stored at normal 230v mains voltage
* Less equipment
* Cost/benefit marginal with current market sell back rates
* (Currently sell back approx 1/2 of purchase rate)
* Medium capital cost

3 Dwelling Power Supply Type

Low Voltage DC

* Simple, few components
* Lighting/appliances DC
* No inverter required
* Least capital cost
* Largest cable/appliance cost
* Future expansion limited

230v AC Mains

* More components
* All normal 230v household appliances etc
* Inverter required
* Largest capital cost