

# **Microgeneration: Financing a Project and Getting Paid For Your Energy**



# Solar - Installed Costs

## Solar Thermal

### → Flat Plates:

→ 2 panel on roof with vented tank: £4,000

→ 2 panel on roof Unvented: £4,500

→ In roof = +10-20%

### → Evacuated Tubes:

→ +5-10% on the above

## Solar PV

### → On roof:

→ 1kwp = £5,600

→ 2kwp = £10,000

### → In roof

→ 1kwp = £7,000

→ 2kwp = £13,000

# Biomass - Installed Costs

## Manual Systems

- Back Boiler - £2,000+
- Wood Stove - £1,000+

## Automatic Systems

- Chip or Pellet Boiler - £10k+

# Heat Pumps - Installed Costs

## Ground Source

- Horizontal collectors - £10,000+
- Boreholes - £15,000+

## Note:

- Depends on size of heat pump and size of collector area required
- 3 Phase over 15kw capacity

## Air to Water Heat Pump

- 4.5kw = £6,000
- 9kw = £7,000
- 14kw = £8,000

## Note:

- 14kw+ requires 3 phase power supply

# Air to Air Heat Pumps - Installed Costs

- 6kw small unit = £4,000
- Larger units variable from £10,000+
- Can be sized for heating and cooling very large venues and offices

# Wind Turbines <50kw

## – Installed Costs

	Generation Est (@5m/s)	Installed Cost	Annual Return (Savings and Income Combined)
Ampair 6000	8,000	£29k+vat	£2,800
Westwind 20kw	24,000	£73k+vat	£7,800
PGE 50kw	120,000	£265k+vat	£39,000
Installed cost = Inc Planning, foundation, 5 year service pack Returns are subject to final confirmation of FIT scheme			

\* turbulence will reduce power and increase payback time

These rates are based on the Feed in Tariff policies, with guaranteed export of 5p and import offset at 12p

Prices in this table are valid for exchange rates and Government Policies on 15/07/2009 ,m/s indicates average annual laminar windspeed.

If energy is exported on site payback will be longer. Government Policies may change.

This simplified model does not include electricity price inflation, maintenance or leveraged investments

For PV assumption is Scotland = 800W/kWp, Midlands = 900W/kWp Southwest = 1000W/kWp

Production rates are generic estimates. You should based your investment decisions on site specific estimates



# Grant Funding



Good Energy 

# Low Carbon Buildings Stream 1 - Domestic

- Available to householders who live in the property
- Subject to basic criteria
  - Insulation etc.
  - MCS approved products and installers only
- Max cap of £2,500 across all technologies
- Apply on-line, very simple to do

# Low Carbon Buildings Stream 1 Breakdown By Technology

Technology	Grant Amount
PV	Maximum of £2,000 per kW of installed capacity, subject to an overall maximum of £2,500 or 50% of the relevant eligible costs, whichever is the lower.
Wind	Maximum of £1,000 per kW of installed capacity, subject to an overall maximum of £2,500 or 30% of the relevant eligible costs, whichever is the lower.
Hydro	Maximum of £1,000 per kW of installed capacity, subject to an overall maximum of £2,500 or 30% of the relevant eligible costs, whichever is the lower.
Solar Hot Water	Overall maximum of £400 or 30% of the relevant eligible costs, whichever is the lower
GS Heat Pump	Overall maximum of £1,200 or 30% of the relevant eligible costs, whichever is the lower.
AS Heat Pump	Overall maximum of £600 or 20% of the relevant eligible costs, whichever is the lower.
Auto Wood Heaters/Stoves	Overall maximum of £600 or 20% of the relevant eligible costs, whichever is the lower.
Wood Fuelled Boiler Systems	Overall maximum of £1,500 or 30% of the relevant eligible costs, whichever is the lower.

# Low Carbon Buildings Phase 2

- Open to public sector bodies and charitable organisations
- PV, Solar Thermal and Ground Source are heavily subscribed and on a waiting list
- Electrical will finish in March 2010 prior to FIT
- Heating will finish by March 2011 prior to RHI
- Must use an MCS approved installer and product

# Lottery Funding

- “Awards for all” up to £25,000 for community or charitable bodies for upgrading kit
- CSEP, for community organisations
  - Scout groups, sports groups, community centres
  - Up to £50,000 per applicant
  - Available as match funding with Phase 2 of LCBP and other sources

# Fuel Poverty and Local Funding

- Some local authorities and regional agencies choose to raise funds to run “fuel Poverty” schemes to assist residents in this situation
- Can be fully or partly funded, contact your local council for more information

# RDPE Funding

## → Two possibilities

- Targeted RDA money for businesses in specific areas to support growth in local economy – Up to 40% funding
- Rural Diversification funding for holders of an agricultural holding number meeting certain criteria. Up to 40% funding in conjunction with other diversification work on site but to include renewable energy

# What to do next

- Fill in a form and we will contact you regarding your requirements
  - Name, address etc..
  - Technology
  - Funding
  - Objective

# Who Do Freesource Work For?

→ Architects, Developers Land Owners, Housing Associations, Many Private Clients, Buying organisations, Nursing Homes, Hotels, Large PLCs, Schools, Churches, Utilities, Engineering Consultancies, Builders, The National Trust

→ And of course our favourite client Good Energy

