## *There has never been a better time to install solar photovoltaics to generate electricity and to meet your environmental aims*

**Transition Eynsham Area (Green TEA)** is offering encouragement for community Photovoltaics (PV) in the Eynsham Area and we are looking for buildings to host installations.

From April 2010 the government will pay 'Feed-in Tariff' (FiT) to encourage renewable generation. The FiT will be a generous rate of up to 41.3p/ kWh*, depending on the size of the installation. Details have just been confirmed by the Department of Energy and Climate Change. This rate will be available for 25 years for installations up to 31st March 2012 and will be adjusted for inflation; for installations after March 2012 the rate decreases. The output of panels is guaranteed at 90% for 10 years, and 80% for 20 years. In addition, the generated electricity can be used by the building and/or sold to the grid.

### Example:

a) 3.7kW 16 module installation (3.8 kW is maximum size on single phase supply) would cost about £15,000 plus VAT (total cost inc VAT @17.5% = £17,625.00; total cost inc VAT at 5% **= £15,330) and could generate 2876 kW hours pa. Roof area required: approx 25m$^2$

| | |
|---|---|
| The Feed in Tariff (FiT) would be 2876@41.3p/kWh | £ 1, 188.00 pa |
| Value of electricity @ 12p/kWh (for use on site) | £ 345.00 pa |
| Total annual return, up to | £ 1,533.00 pa |

This represents a pay back period of only 10-11 years, possibly less if electricity prices continue to rise, or an interest rate of 8.7-10% pa. The figures are even better if VAT can be reclaimed; domestic and charitable installations only pay 5% VAT. More examples overleaf.

Electricity sold to the grid would be paid at about 5p/kWh, depending on the supplier.
Roofs may be pitched or flat, although the highest generation is achieved from a south-facing roof at an angle of 30-40 degrees. A flat installation would generate 90% of the maximum output.

The project could be organised in one of two ways:

### Scenario 1: independently owned

The host building funds the capital cost, claims the feed in tariff and receives all the power to use or export to the grid.

### Scenario 2 : community-owned

TEA leases roofspace from the host building, funds the installation (through grants and selling shares). Host building buys the power generated from TEA; surplus is exported to the grid. TEA claims feed-in tariff and reinvests income in community sustainability projects and longer term, may pay interest on shares.

***Feed in Tariff rates are confirmed as:**

| | | |
|---|---|---|
| installation | under 4 kW | 41.3p/kWh |
| installation | 4-10 kW | 36.1p/kWh |
| installation | 10-100 kW | 31.4p/kWh |

**The reduced VAT rate of 5% applies to installations in residential accommodation or a building used solely for a charitable purpose

*There has never been a better time to install solar photovoltaics!*

## More examples of installations

b) 10 kW 44 module installation would cost about £35,000 plus VAT (total cost inc VAT @17.5% £40,500.00) and could generate 7900 kW hours pa.
Roof area required: approx 72m$^2$

| | |
|---|---|
| The Feed in Tariff (FiT) would be 7900 @36.1p/kWh | £ 2,855.00 pa |
| Value of electricity @ 12p/kWh (for use on site) | £ 949.00 pa |
| Total annual return, up to | £ 3,804.00 pa |

This represents a pay back period of only 11 years, possibly less if electricity prices continue to rise, or an interest rate of 9.4% pa.

c) 1.8 kW 8 or 10 module installation would cost about £9,000 plus VAT (total cost inc VAT @17.5% £11,300.00) and could generate 1500 kW hours pa.
Roof area required: approx 15m$^2$

| | |
|---|---|
| The Feed in Tariff (FiT) would be 1500 @41.3p/kWh | £ 619.50 pa |
| Value of electricity @ 12p/kWh (for use on site) | £ 180.00 pa |
| Total annual return, up to | £ 799.50 pa |

This represents a pay back period of about 14 years, possibly less if electricity prices continue to rise, or an interest rate of 7% pa.

## Business Loans

0% interest business loans are available from the Carbon Trust for energy saving measures. They can give £1,000 of loan for every 1.5 tons of C02 saved per annum; (CO2 saving calculated over a maximum of 4 years).
call 01865 885 850 (in Eynsham!) for more information
Loans could fund solar pv, as well as solar thermal systems and other energy saving measures, such as insulation, boilers and heating controls, heat recovery, lighting, refrigeration, industrial process technologies, materials handling equipment, or materials handling equipment.

## Further information

lowcarbonbuildings.org.uk
http://www.decc.gov.uk

green TEA
Transition Eynsham Area

**Transition Eynsham Area (TEA)** is part of the international Transition network. It is a local, grass-roots movement to cope with the twin threats of rising global temperature and falling oil supplies by making the Transition from an oil-dependent economy to one that uses only renewable energy and is therefore sustainable indefinitely.
By showing that a low-energy, low carbon lifestyle can still retain most of the benefits of modern civilisation, we hope to remove the fear of an unknown future and allow our politicians to take the important decisions they need to make to secure our future and that of our children and grandchildren.
We have other examples of photovoltaics and have contacts with other organisations, such as Low Carbon West Oxford, who have successfully installed community photovoltaics on host roofs.

To get involved, visit: http://www.eynsham.org/teahome.html

This leaflet is based on the best information available to us, but details may change and should be checked with relevant organisations.
Green TEA March 2010