



Renewable Energy: The facts.

Hydro-electric power

What is hydro-electric power?

Hydro-electricity is generated by turbines which use the power of water as it falls. Technology has moved on a great deal since the days of water-wheels, and machinery such as the Pelton turbine makes water-power a viable proposition in hilly areas. Systems can be grid-connected, or power a battery-bank. If you are not connected to the National Grid, the potential cost of connection may make the decision for you.

Can I use hydro power?

First you need a river, stream or reservoir, and a large catchment area. The output you can expect will depend not only on the size of your turbine, but also on the 'head' (the fall from the water-source to your turbine) and the flow-rate of the water. You will need a way of getting the water from the source to the turbine, the turbine itself, and a discharge back into the watercourse.

Do I need permission to use hydro-power?

Yes, you must have a license from the Environment Agency, and you may need planning permission for the turbine house and the works.

Can I get a grant?

Not since February 2010 (unless your Local Authority has any incentive scheme – check with your council's home energy department).

But you can get a Feed-in Tariff!

What is a feed-in tariff?

A feed-in tariff is an incentive scheme designed to encourage people to adopt renewable energy sources. The idea is that a fixed rate will be paid for a fixed term for energy generated on a small scale, such as solar panels on the roof of your home, even if you use the electricity yourself. Further payments will be made for energy exported to the national grid. These payments significantly reduce the payback period for renewable energy sources.

The scheme began on April 1st 2010. The Feed-in Tariffs for hydro schemes appear below:

Tariff levels for electricity financial incentives					
		Year 1: 1.04.10- 31.03.11	Year 2: 1.04.11- 31.02.12	Year 3: 1.04.12- 31.03.12	
Hydro	≤15 kW	19.9	19.9	19.9	20
Hydro	>15 - 100kW	17.8	17.8	17.8	20
Hydro	>100kW - 2MW	11.0	11.0	11.0	20
Hydro	>2MW - 5MW	4.5	4.5	4.5	20

Local schemes offering further discounts may also exist. Contact your local Energy Saving Trust Advice Centre on 0800 512012.

For further advice on this and other renewable energy technologies contact SYEC on 0114 2584574 or info@syec.co.uk