Renewable Feasibility Studies

Low & zero Carbon Technologies

Energy Saving Experts provide Low and zero carbon technologies feasibility studies, suitable for gaining an understanding for if a particular technology would be appropriate to your site and the potential payback.

More building owners are considering the use of renewable technologies for a number of reasons, running cost savings, Building Regulations, Planning Policy, Corporate Social Responsibility and increasingly financial initiatives like the Feed in Tariff (Fits) and the Renewable Heat Incentive (RHI)

Which Renewable?

Photovoltaics (PV)
Solar Hot Water
Wind
Biomass
Heat Pumps

What's covered?

A basic introduction
Application & Costs
Technical Considerations
Management & Operational implications
Rules of thumb for energy generated/CO2 emissions saved/ capital costs
operational costs & savings

Emissions Factors

These are the figures attributed to each fuel used,used within the DER/BER calculations for Part L, with electricity currently being the most important in that it has the highest of the fuel factors.
What this means is that the CO2 emissions associated with electricity are high, and as such any technology that uses grid electricity as its fuel source is going to make the DER/BER higher.

Over time this will change as the source of electricity changes to more renewable sources, the aim by 2050 that it is virtually all from this source.
They are important because currently some renewables may be less attractive than they would be in future due to the carbon savings made are lower than expected and for some planning policies etc may not provide enough CO2 savings on their own.

Feed in Tariffs

Launched in April 2010 these are fiscal incentives for uptake of renewable electricity generation, from Anaerobic Digestion, Hydro, PV, Wind and Micro CHP. The most popular being PV.

There are 3 payments:
Direct payment for total output - the Fit
Direct payment for export to the grid - if exporting surplus
Indirect savings from reduced grid electricity - lower bills

The information required is the collection area, yield co-efficient & hydraulic filter efficiency, average rainfall mm/year and daily non-potable water demand. Also required are the number of occupants.

Renewable Heat Incentive

Due to be launched during 2011 the RHI works in a similar way to the Fits except payments are made for each kW/h produced. Technologies covered are Biomass, Bioliquids,Heat pumps, Solar thermal.

There will be a single payment for total heat generation.
For full details of the payments please see page two.

Leave it to us

To find out which renewable technology will be most suitable for you commission Energy Saving Experts.

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Table of tariffs up to 2013

Technology	Scale	Tariff level for new installations in period (p/kWh) [NB tariffs will be inflated annually]			Tariff lifetime (years)
		Year 1: 1/4/10 – 31/3/11	Year 2: 1/4/11 – 31/3/12	Year 3: 1/4/12 – 31/3/13	
Anaerobic digestion	≤500kW	11.5	11.5	11.5	20
Anaerobic digestion	>500kW	9.0	9.0	9.0	20
Hydro	≤15 kW	19.9	19.9	19.9	20
Hydro	>15-100 kW	17.8	17.8	17.8	20
Hydro	>100 kW-2 MW	11.0	11.0	11.0	20
Hydro	>2 MW – 5 MW	4.5	4.5	4.5	20
MicroCHP pilot*	<2 kW*	10*	10*	10*	10*
PV	≤4 kW (new build)	36.1	36.1	33.0	25
PV	≤4 kW (retrofit)	41.3	41.3	37.8	25
PV	>4-10 kW	36.1	36.1	33.0	25
PV	>10-100 kW	31.4	31.4	28.7	25
PV	>100kW-5MW	29.3	29.3	26.8	25
PV	Stand alone system	29.3	29.3	26.8	25
Wind	≤1.5kW	34.5	34.5	32.6	20
Wind	>1.5-15kW	26.7	26.7	25.5	20
Wind	>15-100kW	24.1	24.1	23.0	20
Wind	>100-500kW	18.8	18.8	18.8	20
Wind	>500kW-1.5MW	9.4	9.4	9.4	20
Wind	>1.5MW-5MW	4.5	4.5	4.5	20
Existing microgenerators transferred from the RO		9	9.0	9.0	to 2027

Table above - Feed In Tariffs available until 2013, this is due to be reviewed in 2012.

Figures for the Renewable Heat Incentive are due early 2011.