



Feed in Tariffs and the Renewable Heat Initiative

Impact on Excess Cold Hazard Enforcement ?

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Feed in Tariffs

- Been available in other countries for some time
- Aim to encourage investment in renewable energy production
- EU 20% Renewable Energy Target
- UK 15% RE target
- Energy Act 2008

Feed in Tariffs

Benefits:

- reduced CO₂ generation and emissions
- less reliance on imported fossil fuels
- Good returns on investment
- Tariffs linked to RPI

Feed in Tariffs

In domestic terms:

- micro wind generation
- micro hydro electricity
- micro CHP
- photovoltaic generation

Who pays?

 npower

 RWE Group

 British Gas



 ScottishPower

 edf
ENERGY

 e.on

 Scottish and Southern
Energy

Tariff lifetimes

- Wind - 20 years
- Hydro - 20 years
- Micro CHP - 20 years
- Solar photovoltaic - 25 years

Process

- Equipment must be MCS certified
- Installed by MCS registered contractor
- When installed installation registered for FITS
- OFGEN main central FITS register

<http://www.microgenerationcertification.org>

Benefits to property owners

- Long term guarantee on return on capital
- Potential for free or subsidised electricity to occupier
- Rent a roof

Returns

Headline Tariffs

Technology	Scale	Generation Tariff - pence per kWh	Export tariff – pence per kWh	Tariff lifetime in years
Solar PV – retrofit	< 4kW	41.3	3	25
Solar PV – new build	<4kW	36.1	3	25
Wind	<1.5kW	34.5	3	20
Wind	1.5-15kW	26.7	3	20
Micro hydro	<15kW	19.9	3	20
Existing generators – installed pre-15/07/09*	All	9	3	Up to 2027

Returns

**2kW Solar PV array
installed in 2010 –
annual benefit**



Mechanism	Performance	Tariff/ Benefit	Reward
Generation Tariff – 41.3p/kWh	Expected performance 1,600kWh	1,600 kWh x41.3p	£660
Export Tariff – 3p/kWh	Assume 50% exported	800 kWh x 3p	£24
Avoided Costs - 12p/kWh	Assume 50% used in the property	800 kWh x 12p	£96

Financial Benefit - £780/ annum

Note: Doesn't take into account impact on house value or the rising cost of grid electricity

Returns

**6kWp pole mounted
wind turbine in a very
good location installed
in 2010 – annual benefit**



Mechanism	Performance	Tariff/Benefit	Reward
Generation Tariff – 26.7p/kWh	Expected performance 9,000kWh (annual output between 6,000 and 12,000kWh)	9,000 kWh x 26.7p	£2,403
Export Tariff – 3p/kWh	Assume 6,000kWh exported	6,000 kWh x 3p	£180
Avoided Costs - 12p/kWh	Assume 3,000kWh used in the property	3,000 kWh x 12p	£360

Financial Benefit - £2943/ annum

<http://www.energysavingtrust.org.uk/Generate-your-own-energy/Cashback-Calculator>

Renewable Heat Incentive

- New scheme expected to be launched June 2011
- Complete details not yet available
- Currently heat from renewable energy meets about 1% of total UK demand
- To reach 2020 renewable energy target around 12% needed
- Energy Act 2008

Renewable Heat Incentive

A blue-tinted photograph of a residential street. The street is lined with multi-story buildings on both sides. Several cars are parked along the left side of the road. The perspective is looking down the street towards the distance.

Domestic technologies:

- biomass boilers
- air and ground source heat pumps
- solar thermal water heaters

Renewable Heat Incentive

A blue-tinted photograph of a residential street with multi-story buildings and parked cars. The street is lined with buildings on both sides, and several cars are parked along the curb. The overall scene is a typical urban residential area.

Excluded technologies:

- wood burning stoves
- open fires, air heaters and “similar applications”

Renewable Heat Incentive

How the scheme works:

- replace fossil fuel heating with renewable technology (e.g. wood)
- Tariffs intended to give financial support to cover gap between conventional and renewable heat systems, plus investment rate of return of 12% across most technologies and 6% for solar thermal

Renewable Heat Incentive

Anticipated tariffs:

Technology	Scale	Proposed tariff (pence/kWh)	Deemed or metered	Tariff lifetime (years)
Solid biomass	Up to 45kW	9	Deemed	15
Ground source heat pumps	Up to 45kW	7	Deemed	23
Air source heat pumps	Up to 45kW	7.5	Deemed	18
Solar thermal	Up to 45kW	18	Deemed	20

Renewable Heat Incentive

Example - Calculating RHI entitlement

A switch from current gas use to a combination of biomass and solar thermal is being considered.

- Reasonable space heating requirement for this property is 10,000 kWh.
- Hot water requires approx 3,700 kWh/year.
- The total deemed heat load = 13,700 kWh/ year.
- Solar thermal panels would provide 60% of the hot water (2,200 kWh).
- Biomass boiler providing the rest (1,500 kWh) as well as the space heating requirement (10,000 kWh).

Renewable Heat Incentive

Example - Calculating RHI entitlement

Technology	Energy delivered	Reward
Biomass	11,500 kWh x 9p =	£1,035 per year for <u>15 years</u>
Solar Thermal	2,200 kWh x 18p =	£396 per year for <u>20 years</u>

Total RHI payments would be £1,431 per year for the first 15 years
(and £396 per year for the following 5 years)

This amount would be paid as a fixed (deemed) annual amount

Renewable Heat Incentive

Potential benefits to landlords:

- Long term guarantee on return on capital
- More choice of available heating systems for rural areas off gas network
- Lower maintenance costs for heat pumps

Renewable Heat Incentive

Potential benefits to occupiers:

- Lower heating bills
- More controllable heating

Policy issues

- Noise
- Air quality and emissions
- Building Regulations

A blue-tinted photograph of a city street. The street is lined with multi-story buildings on both sides. Several cars are parked along the left side of the road, and a white van is driving away in the distance. The word "Questions?" is written in a large, red, sans-serif font across the center of the image.

Questions?