



July - September 2017

what you need to know about sustainable energy now

### Renewable Energy Support Schemes – Tariffs as from 1 July 2017

#### Feed in Tariffs (FITs)

Technology	Scale	Tariff (p/kWh)	Applicable Until
Wind	<50kW	8.33	30 September 2017
	50kW - 100kW	4.92	
	100kW - 1.5MW	2.88	
	1.5MW - 5MW	0.81	
Solar PV	<10kW	4.07	30 September 2017
	10kW - 50kW	4.29	
	50kW - 250kW	1.94	
	250kW - 1MW	1.59	
	>1MW	0.43	
	Standalone	0.29	
Anaerobic Digestion (AD)	<250kW	5.57	30 September 2017
	250kW - 500kW	5.27	
	>500kW	1.99	
Hydro	<100 kW	7.80	30 September 2017
	100kW - 500kW	6.25	
	500kW - 2MW	6.25	
	>2MW	4.54	
Micro-CHP	<2kW	13.95	30 September 2017
All - Export Tariff	All	5.03	30 September 2017

#### Renewable Heat Incentive (RHI) Phase 1 / Non-domestic

Technology	Scale	Tariff (p/kWh)	Applicable until
Small Biomass	<200kWth	Tier 1: 2.71	30 September 2017
		Tier 2: 0.71	
Medium Biomass	200kWth - 1MWth	Tier 1: 4.79	
		Tier 2: 2.08	
Large Biomass	>1MWth	2.08	
Biomass CHP	ALL	4.29	
Ground / Water Heat Pumps (HPs)	ALL	Tier 1: 9.09	
		Tier 2: 2.71	
Air to Water HPs	ALL	2.61	
Solar Thermal	<200kWth	10.44	
Biomethane	ALL	Tier 1: 3.20	
		Tier 2: 1.89	
		Tier 3: 1.45	
Small Biogas	<200kWth	2.88	
Medium Biogas	200kWth - 599kWth	2.26	
Large Biogas	>600kWth	0.86	
Deep Geothermal	ALL	5.22	

#### Renewable Heat Incentive (RHI) Phase 2 / Domestic

Technology	Scale	Tariff (p/kWh)	Applicable until
Ground & Water HPs	<45kWth	19.64	30 September 2017
Air Source HPs	<45kWth	7.63	
Biomass Boilers	<45kWth	3.85	
Solar Thermal	<45kWth	20.06	

NB: the figures in red have changed since our April-June 2017 edition of Sustainable Energy Facts as a result of either degeneration or RPI inflation.

### Market Update

#### Continued success for renewables and its contribution to the UK energy mix this year

This year, renewable generators have provided a record amount of electricity to the UK, accounting for over 26% of all electricity produced. On Sunday 9 April, 26.3% of the UK's total energy demand was supplied by solar alone. Then, on Friday 21 April, the UK produced no electricity from coal, which is the first time since 1882.

A huge milestone was achieved on 8 June, when the National Grid announced that wind, solar, hydro and biomass generated 50.7% of the total energy mix in the UK. This was more than coal and gas combined, with wind and solar providing more than gas alone. The supply of electricity from renewable generators produced enough power for around 13.5 million homes in the UK. Later in the day energy generation by renewable sources peaked at 72.1% – a milestone never before achieved in the UK.

## Volvo leads in the transition from petrol and diesel to electric vehicles

Volvo have announced that by 2019, all their cars will have an electric motor. There have been rapid developments in the market, particularly the reduction in battery prices and an increase in the availability of charging points, as well as rising customer demand. Over the past year, almost 59,000 new 'green' cars were sold in the UK, which marks a 27.5% increase in sales. Moreover, diesel sales plummeted by almost 10%, which emphasizes the move to electric vehicles. It is expected that all other mainstream manufacturers will follow Volvo's lead.

The move to electric cars is necessary for the improvement of the UK's transport sector, which has been falling behind other sectors in the transition towards renewable energy. France has already initiated the move and has plans to fully transition to electric cars by 2040. Nevertheless, a record breaking 22,480 plug-in cars were registered in the UK in the first half of 2017. The National Grid has predicted that the number of plug-in vehicles could reach 9 million by 2030, which is a huge increase from around 90,000 today. However, such a rapid increase in electric vehicles may result in peak electricity demand increasing by more than the total capacity of the proposed new Hinkley Point C nuclear power station, by 2030.

Cities like London will force drivers to convert to electric vehicles to stop the high levels of air pollution from fossil fuel vehicles, but there will be the big issues as the grid infrastructure is currently not capable of recharging all the proposed new vehicle batteries.

## Renewables will undercut traditional forms of fossil fuel

The Government have produced a report on estimated 'Electricity Generation Costs' per megawatt hour (MWh) in 2020, as follows:

- Nuclear £95
- Off shore wind £106
- Large scale solar £67
- On shore wind £63
- Gas £66

There has only been one new gas fired power station built in the last 4 years. All coal fired power stations are going to be phased out by 2025. Hinkley Point C nuclear power station [which is planned to produce 7% of the UK's electricity] is subject to delays and cost overruns, so it is not going to be operational for at least 8-10 years. Offshore wind costs are soon expected to reduce down to £70-90/MWh,

The future must be a mix of different sources of energy, but with an increased proportion from cheaper renewable generators, which no longer require subsidy. Battery storage technology continues to reduce dramatically in price which in time will aid the historic challenge of intermittent renewable energy.

## Update on Anaerobic Digestion (AD) plants – from gas to grid

The resetting of RHI biomethane tariffs – back up April and June 2016 levels – will make new AD plants selling gas into the mains gas grid viable, rather than producing electricity for which support under FITs is no longer viable. The Statutory Instrument was delayed by the General Election but it is expected that it will come back to Parliament after the summer recess, in October 2017. New AD plants must produce at least 50% of their biogas from waste or residue, to be eligible for subsidy support. When over 50% of the total biogas production is from crop-based feedstocks, the participant will not receive support on this additional output. This condition will be applied in 12 monthly periods.

For more guidance, contact one of our Sustainable Energy team.

## New opportunities in battery storage

Battery storage and STOR (Short Term Operating Reserve) sites continue to be the big commercial opportunity for farmers and landowners at the current time. The biggest challenge is identifying spare grid capacity in a constantly changing grid network. Therefore, time is of the essence.

If you are interested in investigating your lands potential for such a site, then do send us a land ownership plan and a member of our Sustainable Energy team can arrange a free desktop appraisal.

For further news on what is happening in the sustainable energy market please visit:

[www.fishergerman.co.uk/renewable-energy](http://www.fishergerman.co.uk/renewable-energy)