



# **United Kingdom**

August 2015

LOG FILE OF CHANGES IN SUPPORT POLICIES AS COMPARED TO LATEST MEMBER STATES PROGRESS REPORT

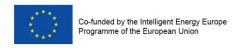


# The EurObserv'ER project

The EurObserv'ER Barometers monitor the renewable energy progress in each Member State of the European Union. Every two months a barometer dedicated to one particular renewable energy technology is published. Moreover, once a year an <u>Overview Barometer</u> collects the main indicators published during the year and completes these with additional renewable sectors which have not been detailed in the individual Barometers. Finally, the Overview Barometer also reports on socioeconomic aspects: employment and turnover in the field of renewables, and the renewable energy investment climate. The country policy reports monitor policy developments by providing an overview of policy changes compared to the Member State Progress Reports.

All Barometers are available for download at <a href="http://www.eurobserv-er.org/">http://www.eurobserv-er.org/</a>. An overview of direct links to Barometers is available in Annex A.

New Barometer releases are announced on Twitter (https://twitter.com/eurobserv\_er).



The EurObserv'ER barometer is a project supported by the European Commission within the DG Energy "Intelligent Energy Europe" programme. It is also supported by Ademe, the French Environment and Energy management Agency, and Caisse des Dépôts.

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.

#### **Abstract**

United Kingdom is legally committed to meeting 15% of the UK's energy demand from renewable sources by 2020. The country considers renewables will also have a crucial role to play in the UK energy mix in the decades beyond, making the most of the UK's abundant natural resources. To increase and accelerate the use of renewable energy, the UK has introduced a number of legislative tools.

A **Renewables Obligation** (RO) who provides incentives for large-scale renewable electricity generation by making UK suppliers source a proportion of their electricity from eligible renewable sources

A **Feed-in Tariffs** (FITs) scheme –who pays energy users who invest in small-scale, low-carbon electricity generation systems for the electricity they generate and use, and for unused electricity they export back to the grid

A **Renewable Heat Incentive** (RHI) who pays commercial, industrial, public, not-for-profit and community generators of renewable heat for a 20-year period

A **Renewable Heat Premium Payment** (RHPP) who gives one-off payments to householders, communities and social housing landlords to help them buy renewable heating technologies like solar thermal panels, heat pumps and biomass boilers

A **Renewable Transport Fuel Obligation** who makes companies that supply more than 450,000 litres of fuel per year source a percentage from renewable sources.

Besides its instruments, the British government is working to the implementation of the **Electricity Market Reform** (EMR) will also provide support for the production of renewable electricity from 2014 onwards. EMR introduces two key mechanisms to provide incentives for the investment required in our energy infrastructure.

The **Contracts for Difference** (CFD) who provides long-term price stabilisation to low carbon plant, allowing investment to come forward at a lower cost of capital and therefore at a lower cost to consumers and the **Capacity Market** who provides a regular retainer payment to reliable forms of capacity (both demand and supply side), in return for such capacity being available when the system is tight.

# **Abbreviations**

BTL	Biomass-to-Liquids
CHP	Combined heat and power plant
EEAG	Environmental and energy aid guidelines
EU-27	European Union, 27 Member States (excludes Croatia)
EU-28	European Union, 28 Member States (includes Croatia)
FiP	Feed-in premium (scheme)
FiT	Feed-in tariff (scheme)
GHG	Greenhouse gas(es)
GHG	Greenhouse gas
ktoe	Kiloton oil equivalent
MSW	Municipal solid waste
NREAP	National Renewable Energy Action Plan
PV	Photovoltaic energy
RE	Renewable energy
RED	Renewable Energy Directive
RES	Renewable energy sources
RMSW	Renewable Municipal solid waste (renewable fraction in MSW)
RQS	Renewable quota scheme
TSO	Transmission system operator

# Renewable energy mix and 2020 target

The 2012 share of renewable energy in the United Kingdom amounted to 4.2% and the target for 2020 has been defined as 15% (source: 'The State of Renewable Energies in Europe', 2013 edition). This objective implies, in the shortest time, a major change in the country's energy structure. The strong points of the country are their wind offshore and biogas (landfill gas) sector and the country is also very active in the solid biomass power sector. UK has the largest wind resource in Europe, especially at sea; the North Sea and the Irish Sea are particularly suitable due to their shallow depth and their steady winds.

**Table** Renewable energy production in the 27 Member States of the European Union (EU-27) and the corresponding figures for the United Kingdom. Data have been expressed in ktoe and refer to the year 2012

[ktoe, 2012]	European Union (27 countries)	United Kingdom	Contribution of United Kingdom to EU-27
Hydro*	29408	438	1.5%
Wind*	17089	1606	9.4%
Solar PV	5732	102	1.8%
Solar thermal**	2116	153	7.2%
Solid Biomass***	74804	1496	2.0%
Biogas	6212	583	9.4%
MSW****	4426	310	7.0%
Geothermal	7825	68	0.9%
Biofuels	11711	880	7.5%
Ocean energy	44	0	0.0%

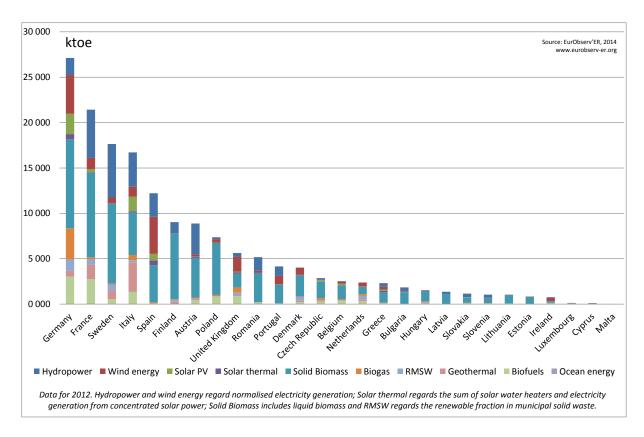
<sup>\*</sup> Normalised electricity generation

Source: EurObserv'ER, 2014 (www.eurobserv-er.org)

<sup>\*\*</sup> Including electricity generation from Concentrated Solar Power

<sup>\*\*\*</sup> Including liquid biomass

<sup>\*\*\*\*</sup> Municipal Solid Waste only regards the renewable fraction in the waste



**Figure** Renewable energy production in the European Union Member States. Data have been expressed in ktoe and refer to the year 2012. Source: EurObserv'ER, 2014 (<a href="www.eurobserv-er.org">www.eurobserv-er.org</a>)

# **Recent RES Policy Developments**

The current EurObserv'ER policy profile is listing recent policy changes in the EU Member States. Starting point for this monitoring is the situation as it has been described in the country's Progress Report (which were due end of 2013). All Renewable Energy Progress Reports are available in English language from <a href="www.eurobserv-er.org">www.eurobserv-er.org</a> (translated versions).

Date	Technology	Policy change
January	Renewable electricity	The UK Government has launched the new
2014		Renewables support mechanism that will
		replace the Renewable Obligation (RO) for
		projects over 5MW. The Contract for
		Difference (CfD) mechanism is a radical
		change from the RO and is likely to be the
		only bankable support scheme for projects
		being delivered after mid-2016.
		The Administrative Strike Prices, in 2012
		prices, published in the December 2013 final
		Delivery Plan is availabkle here:
		https://www.gov.uk/government/uploads/s
		ystem/uploads/attachment_data/file/36026
		9/Updated_Final_AF.pdf
March	Heat pumps, Biomass only boiler,	The Renewable Heat Premium Payment
2014	biomass pellet stoves, solar thermal	(RHPP) householder voucher scheme closed
	panel	on 31 March 2014. Homeowners can now
		apply for the Domestic Renewable Heat
		Incentive scheme (RHI) instead.
April 2014	Heat pumps, Biomass only boiler,	The domestic RHI scheme opened on 9 April
	biomass pellet stoves, solar thermal	2014. It is a financial incentive scheme
	panel	designed to encourage uptake of renewable
		heating among domestic consumers. The
		domestic RHI is targeted at, but not limited
		to, homes off the gas grid. Those without
		mains gas have the most potential to save
		on fuel bills and decrease carbon emissions.
		The scheme will cover single domestic
		dwellings and will be open to homeowners,
		private landlords, social landlords and self-
		builders. It will not be open to new build
		properties other than self-build.
		The domestic RHI will pay the following
		tariffs per unit of heat generated <b>for seven</b>
		years:
		Air-source heat pumps: 7.3p/kWh
		Ground and water-source heat pumps:
		18.8p/kWh
		Biomass-only boilers and biomass pellet

		stoves with integrated boilers: 12.2p/kWh Solar thermal panels (flat plate and evacuated tube for hot water only): 19.2 p/kWh The tariffs have been set at a level that reflects the expected cost of renewable heat generation over 20 years. Payments will be made on a quarterly basis.
July 2014	Solar photovoltaic	New tariff rates for the Feed-in Tariff scheme from 1 October 2014 to 31 December 2014, for photovoltaic installations only.https://www.ofgem.gov.uk/ofgem-publications/89096/fitpaymentratetableforpublication1october2014pvtariffs.pdf Range: 6.38 p/kWh to 14.38p/kWh
July 2014	Biogas (Anaerobic Digestion), hydro, Wind	New tariff rates for the Feed-in Tariff scheme from 1 October 2014 to 31 March 2015, for non-photovoltaic installations only.  https://www.ofgem.gov.uk/ofgem-publications/89098/fitpaymentratetableforp ublication1october2014nonpvtariffs.pdf
February 2015	Renewable electricity (Contracts for Difference)	Contracts for Difference (CFD) Allocation Round One Outcome  DECC has published the 26 February 2015 the outcome of the first allocation round.  https://www.gov.uk/government/uploads/s ystem/uploads/attachment_data/file/40705 9/Contracts_for_DifferenceAuction_ResultsOfficial_Statistics.pdf
March 2015	Solar photovoltaic	From summer 2019 medium and large building-mounted solar PV systems will be allowed to be moved between buildings without the loss of Feed-in Tariff (FIT) payments.  Previously, if a FIT accredited installation was moved it became ineligible for further support. Now, landlords and tenants who cannot guarantee having long-term ownership or lease of a building can move their solar PV and keep their tariff. This change will increase flexibility and make solar PV a much more attractive investment for businesses.

		The definition of building-mounted solar under the FIT will also be amended to require the building to use at least 10 per cent of the electricity generated. Further changes will mean transfers will now be allowed four years after the legislation comes into force and from then on at any point during the FIT payment period. Installations will not be required to remain the same size. https://www.gov.uk/government/news/mo ve-your-solar-panels-and-keep-your-tariff
July 2015	Solar photovoltaic	New tariff rates for the Feed-in Tariff scheme from 1 October 2015 to 31 December 2015, for photovoltaic installations only https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/fit_payment_rate_table_f or_publication_1_october_2015_pv_tariffs.pdf
July 2015	Biogas (Anaerobic Digestion), hydro, Wind	New tariff rates for the Feed-in Tariff scheme from 1 april 2015 to 31 March 2016, for non-photovoltaic installations only. https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/fit_non-pv_tariff_table_1_october_2015_0.pdf
July 2015	Incentive biomass and biogas Sustainability factsheet	This factsheet outlines the new Renewable Heat Incentive (RHI) sustainability requirements coming into effect on 5 October 2015 and the options to meet these requirements. The detailed guidance referred to in the factsheet will be available later in July 2015. https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/sustainability_guidance_published_version.pdf
August 2015	Renewable obligation	Renewables Obligation: Total obligation for 2014/15 The Renewables Obligation (RO) requires licensed electricity suppliers to source a proportion of the electricity they supply to UK customers from renewable sources. We set suppliers' obligations as a number of Renewables Obligation Certificates (ROCs). The obligation levels for 2014/15, announced by the Department of Energy and Climate Change (DECC) in September 2013, are:

- 0.244 ROCs per MWh of electricity supplied to customers in England, Wales and Scotland
- 0.107 ROCs per MWh of electricity supplied to customers in Northern Ireland

Using these obligation levels and multiplying by the total electricity supplied (MWh) to UK customers during this obligation period (1 April 2014 – 31 March 2015), the total obligation for 2014/15 is 71,922,000 ROCs. Split out for each obligation this is:

- 64,502,089 ROCs in England and Wales
- 6,579,671 ROCs in Scotland
- 840,240 ROCs in Northern Ireland

Suppliers can meet their obligations for 2014/15 by 1 September 2015 (31 August for buy-out payments) by:

- Presenting ROCs to us
- Making a buy-out payment of £43.30 per ROC
- Using a combination of ROCs and a buy-out payment.

Any suppliers who do not meet their obligations in full by the end of 1 September will need to make a late payment by 31 October.

Note to the reader: the above overview had been compiled with care. However, in case you miss recent developments please be invited to inform EurObserv'ER on policy changes in a Member State. For communication use e-mail (<a href="mailto:policy@eurobserv-er.org">policy@eurobserv-er.org</a>), Twitter (<a href="https://twitter.com/eurobserv\_er">https://twitter.com/eurobserv\_er</a>).

# **Glossary**

### The Renewables Obligation (RO)

The British government introduced the Renewables Obligation (RO) in 2002 to provide incentives for the deployment of large-scale renewable electricity in the UK.

The RO requires licensed UK electricity suppliers to source a specified proportion of the electricity they provide to customers from eligible renewable sources. This proportion (known as the 'obligation') is set each year and has increased annually.

#### This is how the RO works:

- 1. The level of the annual obligation on electricity suppliers is published by 1 October in the year before it comes into effect, eg the obligation for the financial year starting 1 April 2013 was published on 28 September 2012.
- 2. Eligible renewable electricity generators report the amount of renewable electricity they generate on a monthly basis to the Office of the Gas and Electricity Markets (Ofgem).
- 3. Ofgem issues Renewables Obligation Certificates (ROCs) to electricity generators relating to the amount of eligible renewable electricity they generate.
- 4. Generators sell their ROCs to suppliers (or traders), which allows them to receive a premium in addition to the wholesale electricity price.
- 5. Suppliers present their ROCs to Ofgem to demonstrate their compliance with the RO. Suppliers who do not present enough ROCs to meet their obligation must pay a penalty (known as the 'buy-out price').
- 6. The money Ofgem collects in the buy-out and late payment funds is re-distributed on a prorata basis to suppliers who presented ROCs.

The RO will close to new generators on 31 March 2017. Electricity generation that is accredited under the RO will continue to receive its full lifetime of support (20 years) until the scheme closes in 2037. (source gov.uk)

#### Feed-in Tariffs scheme

The British government introduced the Feed-in Tariffs (FITs) scheme on 1 April 2010.FITs support organisations, businesses, communities and individuals to generate low-carbon electricity using small-scale (5 megawatts (MW) or less total installed capacity) systems.

#### How the FITs scheme works

- 1. An organisation, business, community or individual installs a small-scale low-carbon electricity generation system (solar photovoltaic (PV), wind, hydro, micro-CHP or anaerobic digestion).
- The generator registers the installation with a licensed electricity supplier (if 50 kilowatts (kW) or less) or with the <u>Office of the Gas and Electricity Markets (Ofgem)</u> (if over 50kW).
- 3. The licensed supplier or Ofgem checks the generator is eligible for the FITs scheme and processes the generation data.
- 4. The supplier pays the generator a generation tariff for any electricity generated and, where applicable, an export tariff for any surplus electricity exported to the grid. (source gov.uk)



#### Feed-in Tariff (FIT) Payment Rate Table for Photovoltaic Eligible Installations (1 October 2015 – 31 December 2015)

	2015/16					
Tariff Description	For Eligible Installations with an Eligibility Date on or After 1 April 2015 and before 1 July 2015		For Eligible Installations with an Eligibility Date on or After 1 July 2015 and before 1 October 2015		For Eligible Installations with an Eligibility Date on or After 1 October 2015 and before 31 December 2015	
	(p/kWh)		(p/kWh)		(p/kWh)	
Solar photovoltaic with Total Installed Capacity of 4kW or less, where attached to or wired to provide electricity to a new building before first occupation	Higher rate Middle rate	13.39 12.05	Higher rate Middle rate	12.92 11.63	Higher rate Middle rate	12.47 11.22
	Lower rate	6.16	Lower rate	5.94	Lower rate	5.94
Solar photovoltaic with Total Installed Capacity of 4kW or less, where attached to or wired to provide electricity to a building which is already occupied	Higher rate Middle rate	13.39	Higher rate Middle rate	12.92	Higher rate Middle rate	12.47
, , , , , , , , , , , , , , , , , , , ,	Lower rate	6.16	Lower rate	5.94	Lower rate	5.94
Solar photovoltaic (other than stand-alone) with Total Installed Capacity greater than 4kW but not exceeding 10kW	Higher rate Middle rate Lower rate	12.13 10.92 6.16	Higher rate Middle rate Lower rate	11.71 10.54 5.94	Higher rate Middle rate Lower rate	11.30 10.17 5.94
Solar photovoltaic (other than stand-alone) with Total Installed Capacity greater than 10kW but not exceeding 50kW	Higher rate Middle rate Lower rate	11.71 10.54 6.16	Higher rate Middle rate Lower rate	11.71 10.54 5.94	Higher rate Middle rate Lower rate	11.30 10.17 5.94
Solar photovoltaic (other than stand-alone) with Total Installed Capacity greater than 50kW but not exceeding 100kW	Higher rate Middle rate Lower rate	9.98 8.98 6.16	Higher rate Middle rate Lower rate	9.63 8.67 5.94	Higher rate Middle rate Lower rate	9.63 8.67 5.94
Solar photovoltaic (other than stand-alone) with Total Installed Capacity greater than 100kW but not exceeding 150kW	Higher rate Middle rate Lower rate	9.98 8.98 6.16	Higher rate Middle rate Lower rate	9.63 8.67 5.94	Higher rate Middle rate Lower rate	9.63 8.67 5.94
Solar photovoltaic (other than stand-alone) with Total Installed Capacity greater than 150kW but not exceeding 250kW	Higher rate Middle rate Lower rate	9.54 8.59 6.16	Higher rate Middle rate Lower rate	9.21 8.29 5.94	Higher rate Middle rate Lower rate	9.21 8.29 5.94
Solar photovoltaic (other than stand-alone) with Total Installed Capacity greater than 250kW	6.16		5.94		5.94	
Stand-alone	6.16		4.44		4.28	
Export Tariff	4.85		4.85		4.85	

Note: FIT Payment rates for solar photovoltaic installations have been determined by the Gas and Electricity Markets Authority (Ofgem) under Article 13 of the Feed-in Tariffs Order 2012, in accordance with Annex 3 to Schedule A to Standard Licence Condition 33.

All tariff rates are specified as pence per kilowatt hour at 2015/16 values.

Date of publication: 31 July 2015



# Feed-in Tariff Generation & Export Payment Rate Table for Non-Photovoltaic Installations FIT Year 6 (1 April 2015 to 31 March 2016)

#### Anaerobic Digestion

Description	Period in which Tariff Date falls	Tariff (p/kWh)
	1 April 2010 to 29 September 2011	13.66
	30 September 2011 to 31 March 2014	15.82
Anaerobic digestion with total installed capacity	1 April 2014 to 30 September 2014	12.66
of 250kW or less	1 October 2014 to 31 March 2015	11.39
	1 April 2015 to 30 September 2015	10.13
	1 October 2015 to 31 March 2016	9.12
	1 April 2010 to 29 September 2011	13.66
	30 September 2011 to 31 March 2014	14.63
Anaerobic digestion with total installed capacity	1 April 2014 to 30 September 2014	11.70
greater than 250kW but not exceeding 500kW	1 October 2014 to 31 March 2015	10.54
	1 April 2015 to 30 September 2015	9.36
	1 October 2015 to 31 March 2016	8.42
	1 April 2010 to 30 November 2012	10.66
	1 December 2012 to 31 March 2014	9.64
Anaerobic digestion with total installed capacity	1 April 2014 to 30 September 2014	9.64
greater than 500kW	1 October 2014 to 31 March 2015	9.16
	1 April 2015 to 30 September 2015	8.68
	1 October 2015 to 31 March 2016	8.68

#### <u>Hydro</u>

Description	Period in which Tariff Date falls	Tariff (p/kWh)
	1 April 2010 to 30 November 2012	23.56
	1 December 2012 to 31 March 2014	22.59
Hydro generating station with total installed	1 April 2014 to 30 September 2014	21.46
capacity of 15kW or less	1 October 2014 to 31 March 2015	19.31
	1 April 2015 to 30 September 2015	17.17
	1 October 2015 to 31 March 2016	15.45
	1 April 2010 to 31 March 2014	21.09
Hydro generating station with total installed	1 April 2014 to 30 September 2014	20.04
capacity greater than 15kW but not exceeding	1 October 2014 to 31 March 2015	18.03
100kW	1 April 2015 to 30 September 2015	16.03
	1 October 2015 to 31 March 2016	14.43
	1 April 2010 to 14 March 2013	13.03
Unider consension station with total installed	15 March 2013 to 31 March 2014	16.67
Hydro generating station with total installed	1 April 2014 to 30 September 2014	15.84
capacity greater than 100kW but not exceeding 500kW	1 October 2014 to 31 March 2015	14.25
	1 April 2015 to 30 September 2015	12.67
	1 October 2015 to 31 March 2016	11.40

Hydro generating station with total installed capacity greater than 500kW but not exceeding 2MW	1 April 2010 to 31 March 2014	13.03
	1 April 2014 to 30 September 2014	12.37
	1 October 2014 to 31 March 2015	11.14
	1 April 2015 to 30 September 2015	9.90
	1 October 2015 to 31 March 2016	8.91
	1 April 2010 to 30 November 2012	5.27
	1 December 2012 to 31 March 2013	4.82
Under concepting station with total installed	1 April 2013 to 31 March 2014	3.37
Hydro generating station with total installed capacity greater than 2MW	1 April 2014 to 30 September 2014	3.37
Capacity greater than Zivivv	1 October 2014 to 31 March 2015	3.04
	1 April 2015 to 30 September 2015	2.70
	1 October 2015 to 31 March 2016	2.43

### Wind

Description	Period in which Tariff Date falls	Tariff (p/kWh)
	1 April 2010 to 31 March 2012	40.76
	1 April 2012 to 30 November 2012	38.52
Managed and the second transport and account for a figure and	1 December 2012 to 31 March 2014	22.59
Wind with total installed capacity of 1.5kW or	1 April 2014 to 30 September 2014	18.06
less	1 October 2014 to 31 March 2015	16.26
	1 April 2015 to 30 September 2015	14.45
	1 October 2015 to 31 March 2016	13.73
	1 April 2010 to 31 March 2012	31.53
	1 April 2012 to 30 November 2012	30.12
NAVind with total installed conscitus access then	1 December 2012 to 31 March 2014	22.59
Wind with total installed capacity greater than 1.5kW but not exceeding 15kW	1 April 2014 to 30 September 2014	18.06
1.5kW but not exceeding 15kW	1 October 2014 to 31 March 2015	16.26
	1 April 2015 to 30 September 2015	14.45
	1 October 2015 to 31 March 2016	13.73
	1 April 2010 to 31 March 2012	28.51
	1 April 2012 to 30 November 2012	27.33
NAVind with total installed associate associated	1 December 2012 to 31 March 2014	22.59
Wind with total installed capacity greater than 15kW but not exceeding 100kW	1 April 2014 to 30 September 2014	18.06
13kW but not exceeding 100kW	1 October 2014 to 31 March 2015	16.26
	1 April 2015 to 30 September 2015	14.45
	1 October 2015 to 31 March 2016	13.73
	1 April 2010 to 30 November 2012	22.16
	1 December 2012 to 31 March 2014	18.83
Wind with total installed capacity greater than	1 April 2014 to 30 September 2014	15.06
100kW but not exceeding 500kW	1 October 2014 to 31 March 2015	13.55
	1 April 2015 to 30 September 2015	12.05
	1 October 2015 to 31 March 2016	10.85
	1 April 2010 to 30 November 2012	11.19
	1 December 2012 to 31 March 2014	10.21
Wind with total installed capacity greater than	1 April 2014 to 30 September 2014	8.17
500kW but not exceeding 1.5MW	1 October 2014 to 31 March 2015	7.36
<b>~</b>	1 April 2015 to 30 September 2015	6.54
	1 October 2015 to 31 March 2016	5.89

	1 April 2010 to 20 November 2012	E 27
Wind with total installed capacity greater than 1.5MW	1 April 2010 to 30 November 2012	5.27
	1 December 2012 to 31 March 2013	4.82
	1 April 2013 to 31 March 2014	4.33
	1 April 2014 to 30 September 2014	3.46
	1 October 2014 to 31 March 2015	3.12
	1 April 2015 to 30 September 2015	2.77
	1 October 2015 to 31 March 2016	2.49

### Renewable Heat Incentive (RHI)

The Renewable Heat Incentive (RHI) is the world's first long-term financial support programme for renewable heat. The RHI pays participants of the scheme that generate and use renewable energy to heat their buildings. By increasing the generation of heat from renewable energy sources (instead of fossil fuels), the RHI helps the UK reduce greenhouse gas emissions and meet targets for reducing the effects of climate change.

There are two parts to the RHI:

- Domestic RHI launched 9 April 2014 and open to homeowners, private landlords, social landlords and self-builders
- Non-domestic RHI launched in November 2011 to provide payments to industry, businesses and public sector organisations (source gov.uk)

### **Renewable Transport Fuels Obligation**

The Renewable Transport Fuel Obligation (RTFO) supports the government's policy on reducing greenhouse gas emissions from vehicles by encouraging the production of biofuels that don't damage the environment.

Under the RTFO suppliers of transport and non road mobile machinery (NRMM) fuel in the UK must be able to show that a percentage of the fuel they supply comes from renewable and sustainable sources. Fuel suppliers who supply at least 450,000 litres of fuel a year are affected. This includes suppliers of biofuels as well as suppliers of fossil fuel.

The RTFO only covers biofuels used in the transport and NRMM sectors. For information on using bioliquids or biomass to generate heat or electricity see the Ofgem website.

https://www.ofgem.gov.uk/environmental-programmes/renewables-obligation-ro/information-generators/biomass-sustainability

## **Contracts for Difference (CfDs)**

CfDs support new investment in all forms of low-carbon generation (renewables, nuclear, CCS) and have been designed to provide efficient and cost-effective price stabilisation for new generation, by reducing exposure to the volatile wholesale electricity price.

Low carbon generation projects will apply for a CfD and depending on whether the technology is 'established' or 'less established', the project may have to compete in an auction in order to receive a contract. CfDs will require generators to sell energy into the market as usual but, to reduce exposure to changing electricity prices, CFDs provide a variable top-up from the market price to a pre-agreed 'strike price'. At times where the market price exceeds the strike price the generator is required to pay back the difference thus protecting consumers from over-payment.

The CfD will be implemented through a bilateral contract between the Generator and the Low Carbon Contracts Company Ltd (LCCC).

The payments to be made to generators will be calculated and paid out by the LCCC. The cost of CfDs will be met by consumers via the supplier obligation, a levy on electricity suppliers. (source: http://www.energy-uk.org.uk/)

# References

EurObserv'ER, 2015, www.eurobserv-er.org

https://www.ofgem.gov.uk/publications-library

https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies

https://www.gov.uk/government/publications/electricity-market-reform-contracts-for-difference

https://www.ofgem.gov.uk/ofgem-publications/89098/fitpaymentratetableforpublication1october2014nonpvtariffs.pdf

 $https://www.ofgem.gov.uk/sites/default/files/docs/2015/07/fit\_payment\_rate\_table\_for\_publication_1\_october\_2015\_pv\_tariffs.pdf$ 

http://www.energy-uk.org.uk/

#### **Annex**

EurObserv'ER Barometers published are all available for download. Direct links to all EurObserv'ER publications:

'The State of Renewable Energies in Europe' (PDF, multiple languages)
<a href="http://www.eurobserv-er.org/category/all-annual-overview-barometers">http://www.eurobserv-er.org/category/all-annual-overview-barometers</a>

Wind Energy Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-wind-energy-barometers

Photovoltaic Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-photovoltaic-barometers

Solar Thermal Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-solar-thermal-and-concentrated-solar-power-barometers

Biofuels Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-biofuels-barometers

Biogas Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-biogas-barometers

Renewable Municipal Waste Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-renewable-municipal-waste-barometers

Solid Biomass Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-solid-biomass-barometers

Heat Pump Barometer (PDF, multiple languages)

http://www.eurobserv-er.org/category/all-heat-pumps-barometers