Renewables Obligation

Annual Report **2019-20**

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Executive summary

The Renewables Obligation (RO) is a scheme that supports the deployment of large-scale renewable electricity generation in Great Britain (GB), and the deployment of large-scale, as well as smaller scale renewable electricity generation in Northern Ireland (NI). The scheme is governed by three separate, but similar pieces of legislation: The Renewables Obligation England and Wales, the Renewables Obligation Scotland (ROS) and the Northern Ireland Renewables Obligation (NIRO). Each obligation period licensed electricity suppliers are required to present a specified number of Renewables Obligation Certificates (ROCs), in respect of each MWh of electricity supplied to customers. Those suppliers not presenting sufficient ROCs to fulfil their obligation are required to make a payment to cover the shortfall[1]. This report covers scheme activity during the 2019-20 obligation period (1 April 2019 – 31 March 2020).

Supplier compliance (p22-34)

In 2019-20, suppliers presented 115.94 million ROCs[2] towards the total UK obligation of 130.18 million ROCs. Those suppliers not meeting their obligation through presenting ROCs by the deadline of 1 September are required to make up the shortfall by making payments into the buy-out fund no later than 31 August. Where this payment deadline is missed suppliers have not met their obligations on time and are required to fulfil any remaining part of their obligation by paying into the late payment fund[3] by 31 October. The payments collected resulted in £654.6 million being redistributed to eligible suppliers from the combined buy-out fund and late payment funds. This was substantially less than the previous record of £841.9 million set in 2018-19. Each ROC was notionally worth £54.43, giving a scheme value of approximately £6.31 billion.[4]

Thirteen suppliers did not comply with their obligations. Ten suppliers ceased trading during the 2019-20 compliance round and did not make payments or present ROCs towards their obligations. The remaining three suppliers failed to discharge their obligations in full by the 31 October legislative deadline. We deployed a robust enforcement strategy in respect of non-

[1] The buy-out price is the sum that suppliers must pay for each ROC not presented towards their obligation. Link to buy-out price information for 2019-20: < https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-buy-out-price-and-mutualisation-ceilings-2019-20>

[2] ROCs issued during the 2018-19 or 2019-20 obligation years can be presented towards the 2019-20 obligation.

[3] Late payments are subject to a daily interest penalty at an annualised rate of 5% plus the Bank of England base rate (0.1%) as of the first day of the late payment period.

[4] Calculations are detailed in chapter 4.

compliant suppliers that involved issuing consultations on seven Final Orders and the issuing of three Final Orders.[5]

Mutualisation (p35-36)

The 13 suppliers that did not meet their obligations meant that there was shortfall of £33.14m in the buy-out/late payment funds as of the late payment deadline of 31 October 2020. This resulted in mutualisation being triggered on the RO and ROS for the third successive year.[6] The mutualisation process requires all compliant and partially compliant suppliers to make additional payments to make up the shortfall. Mutualisation payments are made to Ofgem on a quarterly basis and the first payments in respect of the 20-21 compliance round will be due from suppliers by the end of August 2021.

ROC issue and renewable generation (p11-14)

We issued 114.7 million ROCs to renewable generating stations in 2019-20, the highest number of ROCs issued in scheme history. This ROC issue represents 84.9 TWh of renewable electricity generation, an increase of 7.4% from last year, and is equivalent to 31% of total 2019-20 electricity supply in the UK. This rises to 112.8 TWh of renewable generation and is equivalent to 41.2% of UK supply when including generation from the Feed-in Tariffs (FIT)[7] and Contracts for Difference (CfD)[8] schemes.

Audit (p37-42)

The 2019-20 audit programme consisted of targeted generator audits being conducted on 108 stations in the UK; more than two thirds of these (70%) were rated either 'weak' or 'unsatisfactory'. For micro-generators[9] in Northern Ireland we conducted a further 43 audits, where almost 33% were identified as having significant discrepancies and/or missing information which could potentially affect their accreditation status and/or ROC issue. High levels of non-compliance were expected due to targeted audits with a focus on key risk areas and generators of particular concern.

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[5] Link to information on provisional and final orders: <https://www.ofgem.gov.uk/investigations/provisional-orders-and-final-orders>

[6] The threshold to trigger mutualisation is £15.4m for England and Wales, and £1.54m for Scotland.

[7] Link to information on the FIT scheme: <https://www.ofgem.gov.uk/environmental-programmes/fit/about-fit-scheme>

[8] Link to information on the CfD scheme: <https://www.lowcarboncontracts.uk/the-cfd-scheme>

[9] Micro generators are those with a Declared Net Capacity (DNC) of 50kW or less. Micro generators are only eligible for the RO in NI and are referred to as Micro-NIRO.

Audits were also conducted on four licensed suppliers where 50% were rated either 'weak' or 'unsatisfactory', and three agent or 'rent-a-roof' companies where all were rated either 'good' or 'satisfactory'.

Generating stations accredited (p43-47)

Although the Renewables Obligation scheme closed to new entrants[10] prior to the start of the 2019-20 year, the number of accredited stations increased as the accreditation assessment of stations with earlier accreditation dates were carried over and concluded. On 29 October 2020 when data was extracted for this report, 26,582 stations had been accredited with a total generating capacity of 35.4GW. This is an increase of 57 stations and 234MW from the figures reported in the 2018-19 annual report.

[10] Link to information on the RO closure: <https://www.ofgem.gov.uk/environmental-programmes/ro/about-ro/ro-closure>

Associated documents

The annual reports for all previous obligation periods are published in the publications library:
Link to Ofgem RO publications library
<https://www.ofgem.gov.uk/environmental-programmes/ro/contacts-publications-and-data/publications-library-renewables-obligation-ro>

Up-to-date data on scheme activity is published on the public reports and data page within the RO section of the Ofgem website:
Link to Ofgem RO public reports and data webpage
<https://www.ofgem.gov.uk/environmental-programmes/ro/contacts-publications-and-data/public-reports-and-data-ro>

A variety of data reports are available to download from the Renewables and CHP Register:
Link to the Renewables and CHP Register
<https://renewablesandchp.ofgem.gov.uk/>

Information for generators accredited under the RO is available on our website:
Link to information for generators
<https://www.ofgem.gov.uk/environmental-programmes/ro/applicants>

Information for licensed UK electricity suppliers on how to comply with the RO is available on our website:
Link to information for suppliers
<https://www.ofgem.gov.uk/environmental-programmes/renewables-obligation-ro/information-suppliers>

The legislation which underpins the RO (England & Wales), ROS (Scotland) and NIRO (Northern Ireland) schemes can be viewed on the legislation.gov.uk website:
Link to the RO section of the legislation.gov.uk website
<http://www.legislation.gov.uk/all?title=renewables%20obligation>

Contents

Context

The Renewables Obligation (RO) is a scheme that supports the deployment of large-scale renewable electricity generation in Great Britain (GB), and the deployment of large-scale, as well as smaller scale renewable electricity generation in Northern Ireland (NI). The RO is designed to provide long term[11] support for renewable electricity generators in the form of Renewables Obligation Certificates (ROCs), and requires that in each obligation period licensed electricity suppliers present a specified number of ROCs in respect of each MWh of electricity supplied to customers. Those suppliers not presenting sufficient ROCs to fulfil their obligation are required to make a payment to cover the shortfall[12].

The scheme was introduced in England, Wales and Scotland in 2002 and in Northern Ireland in 2005; and with some exceptions it closed to new generation capacity on 31 March 2017.[13]

There are three separate obligations across the UK: The Renewables Obligation England and Wales, the Renewables Obligation Scotland (ROS) and the Northern Ireland Renewables Obligation (NIRO). The scheme is governed by three separate, but similar, pieces of legislation, one for each obligation. These are known as the RO Orders (the Orders).

The Gas and Electricity Markets Authority (the Authority) is the statutory body responsible for administering the RO and ROS in Great Britain (GB). We also administer the NIRO on behalf of the Northern Ireland Authority for Utility Regulation (NIAUR); however, NIAUR retains the statutory responsibility for administering the NIRO. The Authority's day-to-day functions are performed by Ofgem, the office of the Authority.

The scheme obligation period runs annually from 1 April to 31 March. The obligation level for suppliers is announced before the start of each obligation period by the Department for Business, Energy and Industrial Strategy (BEIS) on behalf of the Secretary of State. The obligation level is set, based on a forecast of renewable electricity generation plus a headroom of 10%. This is intended to ensure demand for ROCs outstrips supply, thereby ensuring the value of ROCs is maintained and the scheme administration costs can be met from the buyout-fund.

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[11] Twenty years from the date of accreditation or until 31 March 2037, whichever is earlier - except for generators accredited before 26 June 2008 that are eligible to claim ROCs on generation that occurs until 31 March 2027.

[12] The buy-out price is the sum that suppliers must pay for each ROC not presented towards their obligation. Link to buy-out price information for 2019-20: < https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-buy-out-price-and-mutualisation-ceilings-2019-20>

[13] Link to information on the RO closure: <https://www.ofgem.gov.uk/environmental-programmes/ro/about-ro/ro-closure>

During an obligation period, we issue eligible generating stations with Renewables Obligation Certificates (ROCs) for the renewable electricity they generate. ROCs are tradable, can be sold between parties and can be redeemed against any of the three separate obligations.

After the end of an obligation period, we confirm each supplier's obligation based on the amount of electricity it has supplied to customers in the countries (England and Wales, Scotland and/or Northern Ireland) in which it holds licences. We set this obligation as a specific number of ROCs. Suppliers must meet their obligations by presenting ROCs to us, making a payment per ROC into a buy-out fund, or through a combination of these. We then withdraw our scheme administration costs from the buy-out fund and redistribute the remaining buy-out payments to suppliers, in proportion to the number of ROCs they presented.

1. Introduction

1.1 The Orders require us to produce an annual report on the scheme by 1 April following the end of an obligation period. This report fulfils this duty covering the 2019-20 obligation period (1 April 2019 to 31 March 2020). The Orders[14] state the minimum information the report must include:

- details of the compliance of each obligated electricity supplier, including the ROCs they presented, payments they made and our redistribution of these payments,
- the number of ROCs we issued, broken down by generation technology,
- details of any mutualisation triggered (not applicable for the NIRO), and
- the outcome of any investigations we conducted into suppliers' and generators' compliance with the Orders.

1.2 We can also publish "any other matter" that we consider relevant in the report. As such we have included information on the number and type of stations we have accredited, the amount of renewable generation for which ROCs were claimed, biomass sustainability, the value of the scheme, recent and upcoming changes in legislation and improvements we have made to the administration of the scheme.

Points to note

1.3 Unless it is clear from the context, 'RO' refers to the three UK obligations – the RO England and Wales, the ROS and the NIRO – collectively. Similarly, 'ROC' usually refers collectively to England and Wales ROCs (ROCs), Scottish ROCs (SROCs) and Northern Ireland ROCs (NIROCs).

1.4 Although there are three buy-out funds and three late payment funds for the RO (one for each obligation), where we refer to the 'buy-out fund' or 'late-payment fund' without specifying the obligation, this refers to all three collectively.

1.5 The data included in this report was extracted from the Renewables and CHP Register (the Register) on 29 October 2020. This date allowed production of the report to commence once the late payment deadline of 31 October had passed and activities in relation to the 2019-20 RO compliance period were predominantly complete. The data stored in the Register

[14] Article 86(1)(f) of the RO, Article 57(1)(f) of the ROS and Article 49(1)(e) of the NIRO list the requirements for the annual report.

is live data and subject to change. For example, a station's accreditation details might be amended, or the number of ROCs issued/revoked might change. As such, data downloaded from the Register at a later date may vary from those used in this report, although minimal change would be expected given the time that has elapsed since the end of the RO year.

1.6 The data used to produce the charts has been published alongside this report.

1.7 If you have any questions about the content of this report, please let us know by emailing EServeFeedback@ofgem.gov.uk.

2. ROCs issued and renewable generation

Chapter summary

In 2019-20, we issued 114.7 million ROCs to renewable generating stations, the highest number of ROCs in scheme history. This ROC issue represents 84.9 TWh of renewable electricity generation, an increase of 7.4% from last year, and is equivalent to 31% of total 2019-20 electricity supply in the UK. Most technology types saw an increase in ROC issue compared to 2018-19. Offshore wind ROC issue rose by 13.2%, hydro by 11.6% and onshore wind by 9.0%. Only landfill gas and solar PV stations saw a decrease in ROC issue, these were down 7.3% and 3.4% respectively.

ROCs issued and associated renewable generation in 2019-20[15]

2.1 The 2019-20 year saw an increase in the amount of renewable electricity generated, resulting in an increase in the number of certificates issued. ROC issue in 2019-20 was 8.3% greater than in 2018-19 and 14% greater than in 2017-18. Renewable generation on the RO was equivalent to 31% of the electricity supplied in the UK this year. This rises to 41.2% when including generation from the FIT and CfD schemes, an increase of 5.3% compared to the 2018-19 year. The exact figures for 2019-20 and the percentage change from previous years are shown in **Table 2.1**.

Table 2.1: Comparison of ROCs issued from 2017-18 to 2019-20

	2019-20	Change from 2018-19	Change from 2017-18
Total number of ROCs issued	114,706,958	+8.3%	+14.0%
Associated renewable generation (MWh)	84,920,897	+7.4%	+13.0%
Total UK electricity supply (MWh)	273,646,540	-1.3%	-3.9%
RO renewable generation as a proportion of electricity supply*	31.0%	+2.5pp**	+4.6pp**
Renewable generation including FIT & CfD (MWh)	112,854,885	+13.2%	+25.2%
Renewable generation as a proportion of electricity supply*	41.2%	+5.3pp**	+9.6pp**

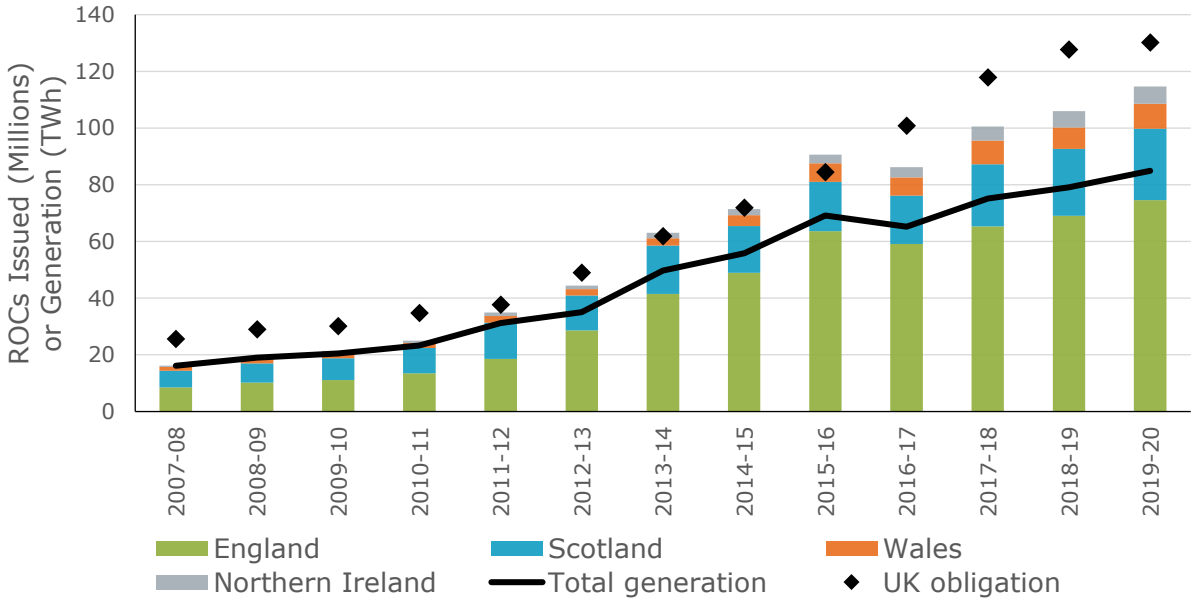
* These figures include generation not exported to the grid. This generation is not captured within the total electricity supply figure; therefore these figures are only representative.

** pp – Percentage points

[15] The data for 2019-20 used in this chapter was downloaded from the Renewables and CHP Register on 29 October 2020. For more information on extracting data from the public reports please refer to Appendix 3.

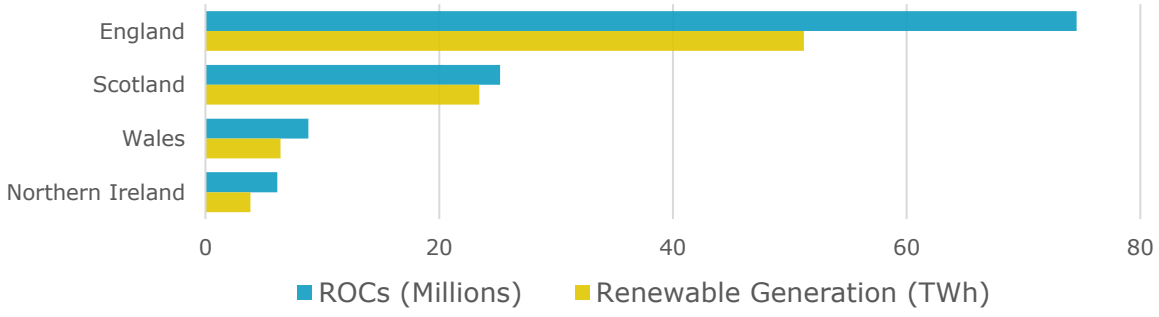
2.2 The UK obligation for 2019-20 was 130.2m ROCs. As shown in **Figure 2.1** there was a shortfall of approximately 15.5 million ROCs issued for the year. This compares to a 21.7 million shortfall for the previous obligation year. As a proportion, the shortfall was 11.9% of the obligation for 2019-20, compared with 17.0% for 2018-19.

Figure 2.1: ROCs issued, obligation level and renewable generation since 2007-08



2.3 Since the introduction of banding in 2009 different ROC rates/MWh of generation have been available for different technology types. Most of the capacity accredited at higher ROC rates is located in England, while in Northern Ireland, Scotland and Wales most capacity is associated with technologies that receive lower ROC rates. In Northern Ireland a very large number of generators receive ROCs at a rate greater than one ROC/MWh, however the total number of ROCs issued to these generators is small. **Figure 2.2** shows the comparative volumes of generation and ROC issue in the different parts of the UK.

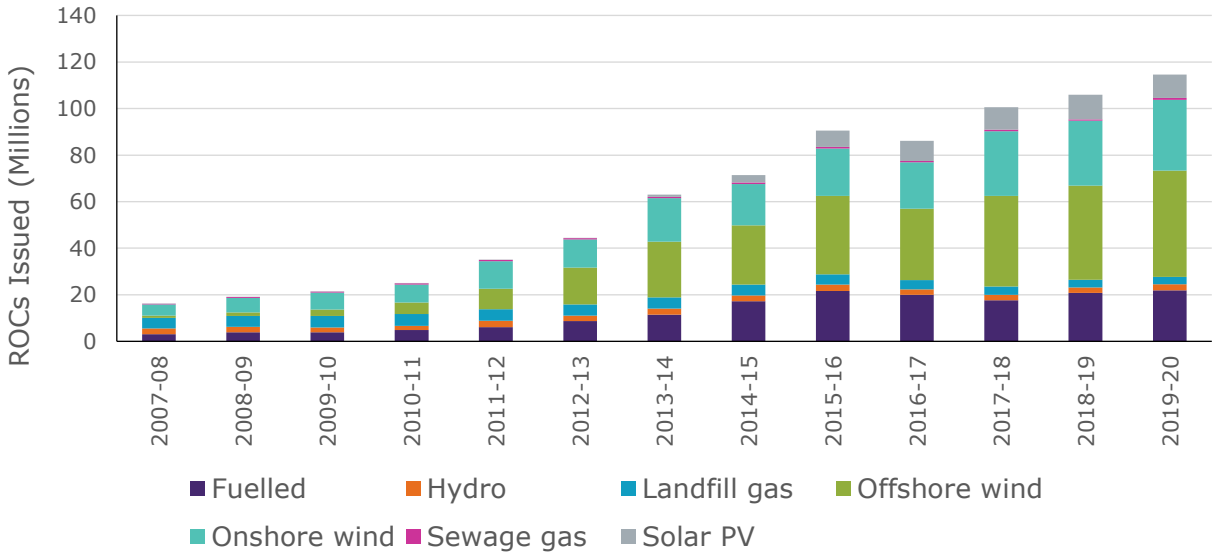
Figure 2.2: ROCs issued and renewable generation by country for 2019-20



Technologies

2.4 **Figure 2.3** shows the total number of ROCs issued to different technologies per obligation period since April 2007. Compared to 2018-19, all technology types saw an increase with the exception of landfill gas and solar PV which decreased by 7.3% and 3.4% respectively. The total number of certificates issued was the highest ever recorded with records being set for offshore wind, onshore wind, fuelled and sewage gas stations.

Figure 2.3: Issue of ROCs by generation technology since 2007-08



2.5 **Table 2.2** gives a more detailed breakdown of ROC issue by technology and country for 2019-20. In terms of ROCs issued, England issued the highest number for offshore wind, fuelled, solar PV and landfill gas. Whereas in Scotland, ROC issue to onshore wind, tidal and hydro stations was higher than elsewhere in the UK. These figures are a reflection of the capacity of each technology installed in each country.

Table 2.2: ROCs issued in 2019-20 by technology and country

Technology	England	Scotland	Wales	Northern Ireland	Total
Offshore wind	38,848,885	2,409,920	4,419,343	0	45,678,148
Onshore wind	6,392,583	17,507,998	2,531,553	4,007,852	30,439,986
Fuelled	17,217,756	2,436,656	790,421	1,467,667	21,912,500
Solar PV	8,756,654	56,589	773,920	563,920	10,151,083
Landfill gas	2,622,065	322,335	82,084	56,073	3,082,557
Hydro	60,253	2,379,388	165,030	53,322	2,657,993
Sewage gas	652,051	26,559	36,883	0	715,493
Tidal power	0	69,198	0	0	69,198
Total	74,550,247	25,208,643	8,799,234	6,148,834	114,706,958

Revoked and retired ROCs

2.6 ROCs can be revoked if, for example, we find that the number initially issued was incorrect. We may identify such errors through reviews of data submitted to us, audits of generating stations (see Chapter 5), or where the generator notifies us of an error. This year we revoked 27,076 ROCs from 103 stations, which were issued in respect of the 2019-20 obligation year. Just over 20,000 or 75% of these came from 10 generating stations. This total is significantly less than the 40,515 ROCs revoked in 2018-19. The figure can vary considerably from year to year as it is largely dependent on submission errors made by generators or errors identified through audit.

2.7 We are unable to revoke ROCs if a supplier has already presented the ROCs to us for compliance. In this situation, we must withhold an equivalent number of ROCs from being issued to the station in the future.[16] This year, 2,994 ROCs from 10 stations were withheld, compared to the 11,858 ROCs withheld in 2018-19.

2.8 The registered holder of a ROC may voluntarily retire it on the Register at any time. After retirement it can no longer be used for RO compliance. A registered holder may retire a ROC for a number of reasons, for example if they can no longer use it towards their obligation because it has already expired. This year, two ROCs were retired from one generating station.

[16] Article 25 of the RO, 41A of the ROS and article 37A of the NIRO

3. Biomass sustainability

Chapter summary

In the 2019-20 obligation period, 345 fuelled generating stations were required to report their biomass fuels against the land and greenhouse gas emissions criteria, collectively known as the sustainability criteria. Compliance with the sustainability criteria is a requirement for ROC issue, for the 129 bioliquid and solid biomass or biogas[17] stations greater than 1MW Total Installed Capacity (TIC). Compliance with the sustainability criteria is not linked to ROC issue for the remaining 216 solid biomass and biogas stations smaller than 1MW TIC. The analysis in this chapter is based upon the data provided by these stations as part of their monthly and annual reporting requirements.

3.1 The information in this chapter is based on the data provided by the operators of fuelled stations as part of their monthly and annual reporting requirements. There are a number of stations that have not yet been granted RO accreditation, but will be eligible to receive ROCs for generation in the 2019-20 obligation period if accredited. It is important to note that this chapter only includes the information for stations that have been granted accreditation and had their sustainability information approved at the time of writing.[18]

3.2 Operators presented 121 audit reports to us in 2019-20. Of the reports submitted, 116 were of an adequate standard. There were five reports that have not met the required standard and a further eight accredited RO stations that have not yet presented an audit report. We have suspended the issuance of ROCs to these 13 stations as a result.

3.3 Operators presented 212 profiling datasets to us in 2019-20. Of the profiling datasets submitted 209 were of an adequate standard and three have not met the required standard. There are four accredited RO stations that have not yet presented profiling data. We have suspended the issuance of ROCs where the datasets have not met the required standard or have not been submitted.

[17] For biogas details please refer to the gasification and anaerobic digestion sections of this chapter.

[18] Correct as of 19 January 2021.

3.4 Some annual sustainability information has not yet been approved and therefore this information may be subject to change. In order for comparisons to be made[19], the 'Renewables Obligation: Annual Report 2017-18[20], 'Renewables Obligation: Annual Report 2018-19'[21] and associated Sustainability Datasets[22] were utilised.

Sustainability Criteria

3.5 All stations using bioliquid, solid biomass or biogas with a Declared Net Capacity (DNC) greater than 50kW, must report against land and greenhouse gas (GHG) criteria (known collectively as the sustainability criteria), and provide additional information annually on the fuels used (known as the profiling data). This information is supplied to the best of the operator's knowledge and belief.[23]

3.6 Each month all bioliquid stations and solid and gas stations with a Total Installed Capacity (TIC) greater than or equal to 1MW must report against the sustainability criteria. On an annual basis, this monthly information is independently verified by an auditor with a report submitted to Ofgem for review. Reporting on and meeting the sustainability criteria are formally linked to ROC issue for these stations and certificates can be postponed, revoked or withheld.

3.7 Additional information on the sustainability requirements can be found in the 'Renewables Obligation: Sustainability Criteria Guidance' and 'Renewables Obligation: Sustainability Reporting Guidance' available on our website.[24]

3.8 Three hundred and twenty five stations reported against the sustainability criteria, as shown in **Table 3.1**. There are two generating stations that use both solid biomass fuels and bioliquid fuels. The consignments used by these stations appear in each relevant section.

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[19] The 2017-18 and 2018-19 Biomass Sustainability Datasets and Annual Reports have been utilised for comparison purposes only and may not contain information for stations that were granted accreditation after the reports were published.

[20] See our 'Annual Report 2017-18' here: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-annual-report-2017-18>

[21] See our 'Annual Report 2018-19' here: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-annual-report-2018-19>

[22] See our '2017-18 Biomass Sustainability Dataset' here: <https://www.ofgem.gov.uk/publications-and-updates/biomass-sustainability-dataset-2017-18> and see our '2018-19 Biomass Sustainability Dataset' here: <https://www.ofgem.gov.uk/publications-and-updates/biomass-sustainability-dataset-2018-19>

[23] Article 82 of the ROO 2015 (as amended), Article 54 of the ROS 2009 Order (as amended) and Article 46 of the NIRO 2009 Order (as amended).

[24] See our 'Sustainability Criteria Guidance': <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-sustainability-criteria> and 'Sustainability Reporting Guidance': <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-sustainability-reporting>

3.9 There are three instances where a bioliquid consignment has not met the GHG emissions criteria. This compares with zero for 2018-19 and 11 cases for 2017-18. The independent auditor stated that these instances were due to high parasitic load[25] combined with low generation output. There were also two instances where an anaerobic digestion consignment had not met the criteria for GHG emissions. This compares with zero for both 2018-19 and 2017-18.

Table 3.1: Consignments[26] reported by stations against the sustainability criteria, split by technology type and capacity[27]

		Gasification Stations		AD Stations		Solid Biomass Stations		Bioliquid Stations
		<1MW	≥1MW	<1MW	≥1MW	<1MW	≥1MW	-
Meets the land criteria	Yes	65	12	165	204	15	1,397	32
	No	0	0	0	0	0	0	0
	Exempt	0	42	263	908	13	676	406
	Unknown	0	0	25	0	0	0	0
Meets the GHG criteria	Yes	57	12	59	346	13	1,549	434
	No	0	0	2	0	0	0	3
	Exempt	0	42	252	766	13	524	1
	Unknown	8	0	140	0	2	0	0

N.B. The number of consignments reported varies between stations.

3.10 The average life-cycle GHG emissions for the biomass used is shown in **Table 3.2**, split by technology type. For bioliquids, the GHG criteria is based on a percentage emissions saving against the fossil fuel comparator[28]. During 2019-20 there was a reduction in the weighted average GHG emission figures for all technology types, with the greatest reduction for anaerobic digestion consignments.

[25] Parasitic load is the amount of electricity a power plant uses to run its electricity-producing processes.

[26] Where we refer to a consignment in the context of stations greater than or equal to 1MW, this refers to a single consignment submission for one month. For stations less than 1MW, this is just reported once in the year.

[27] Consignments are split by capacity, as well as technology type, in order to differentiate between the different reporting requirements.

[28] The fossil fuel comparator is specified in Paragraph 19, Annex V, Part C of the Renewable Electricity Directive as 91gCO2e/MJ.

Table 3.2: Weighted average GHG emission figures and thresholds split by technology type

	Gasification Stations (gGHG/MJ)	AD Stations (gGHG/MJ)	Solid Biomass Stations (gGHG/MJ)	Bioliquid Stations (% saving)
2017-18	10.07	39.70	25.20	89.90
2018-19	24.35	38.31	26.71	89.88
2019-20	22.55	31.15	23.57	90.86
Threshold	79.20	79.20	79.20[29]	50%[30]

Feedstock/fuel types

3.11 The 71 gasification[31] stations that reported against the sustainability criteria burnt 1,323.39 million m^3 of syngas[32] in 2019-20; a 386.68 million m^3 increase compared to 2018-19. All gasification consignments were derived from woody biomass; 75.9% of syngas burnt was derived from waste wood[33], 22.5% from soft wood that is non-waste wood, and 1.7% derived from non-waste wood mixtures of softwood and hardwood.

3.12 The 157 anaerobic digestion stations that reported against the sustainability criteria burnt 525.19 million m^3 of biogas in 2019-20;[34] a 63.73 million m^3 decrease compared to 2018-19. As shown in **Figure 3.1** silage[35], food, garden and plant waste and manures and slurries made the largest contributions. Distillery waste, dissolved air flotation (DAF) sludge/waste water, crops, glycerol, dairy waste, municipal waste, and 'other' complete the remaining proportion. The 'other' consignments consist of blood and viscera, biodegradable waste, tallow, fishery waste, and plant oils.

[29] The GHG emissions threshold is 79.2 gCO2e/MJ for solid biomass stations. Any stations classed as a 'post-2013 dedicated biomass station' have a threshold of 66.7 gCO2e/MJ. 'Dedicated biomass' is defined in Schedule 5 of the ROO and Schedule 2 of the ROS and NIRO Orders.

[30] From 1 January 2018, any consignment of bioliquid produced by an installation that first started producing liquid fuel from biomaterial before 6 October 2015 is required to meet the current GHG threshold of 50%. Any consignment of bioliquid produced by an installation that first started producing liquid fuel from biomaterial on or after 6 October 2015 is required to meet a GHG threshold of 60%.

[31] Gasification converts fuel into a synthetic gas by partial combustion. This can then be used in a generating station. 'Gasification' is defined in Article 2 of the ROO (as amended), ROS 2009 (as amended) and NIRO 2009 (as amended).

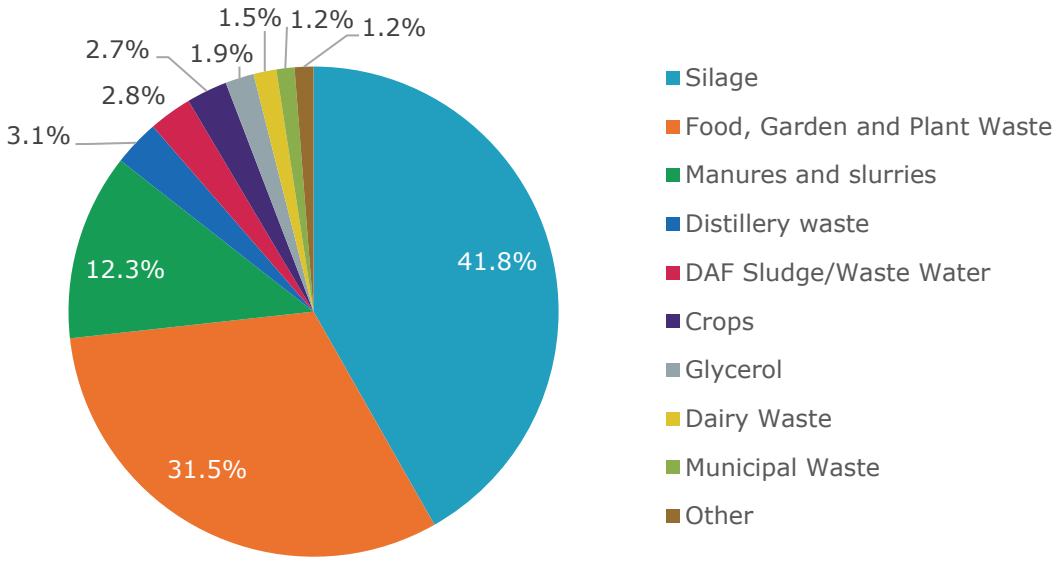
[32] Syngas or synthetic gas produced from gasification.

[33] For consignments derived from waste, operators of generating stations do not need to complete the woody biomass section of the profiling data.

[34] There are a number of stations whose fuel measurement and sampling procedures do not require them to keep records of individual feedstocks, and so report a mixture on their profiling data.

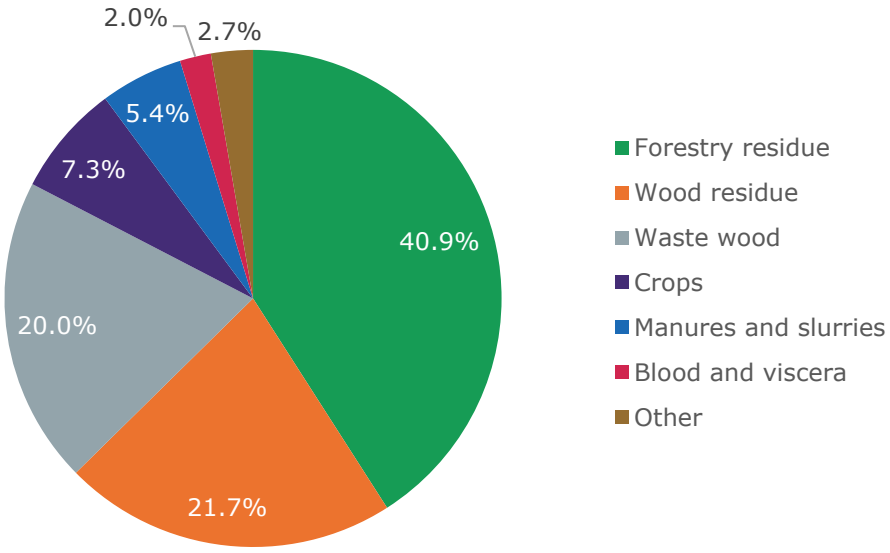
[35] Feedstock made from green foliage crops which have been preserved through a process of anaerobic fermentation.

Figure 3.1: The type of feedstocks used (by volume of gas burnt) in anaerobic digestion stations



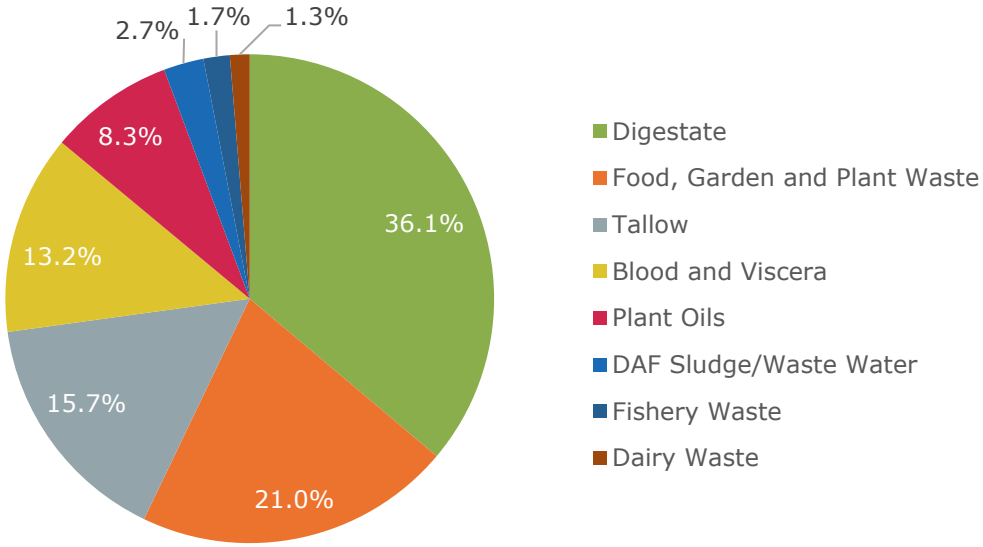
3.13 The 70 stations that reported solid biomass consignments burnt 11.69 million tonnes of solid biomass consignments in 2019-20; a 1.60 million tonne increase compared to 2018-19. As shown in **Figure 3.2,** the greatest contributions to this total were from forestry residues (40.9%), wood residues (21.7%) and waste wood (20.0%). 84% of solid biomass used in 2019-20 was of woody origin, including arboricultural residues. Crops, manures and slurries, blood and viscera, and 'other' complete the remaining proportion. The 'other' feedstocks include DAF sludge/waste water, arboricultural residues, wood product, distillery waste, and food, garden and plant waste.

Figure 3.2: The type of solid biomass used in direct combustion stations



3.14 The 29 bioliquid stations that reported against the sustainability criteria burnt 134.2 million litres of bioliquid consignments in 2019-20; a 26.24 million litre increase compared to 2018-19. As shown in **Figure 3.3,** the greatest contributions were from digestate (36.1%); food, garden and plant waste (21.0%); and tallow (15.7%). Blood and viscera, plant oils, DAF sludge/waste water, fishery waste, and dairy waste complete the remaining proportion. Compared with 2018-19, this shows a decrease in the proportion of digestate and an increase in the use of blood and viscera.

Figure 3.3: The type of bioliquid used in bioliquid stations



Country of origin

3.15 The gasification and anaerobic digestion consignments were almost wholly sourced within UK and ROI in 2019-20, similar to 2017-18 and 2018-19. Bioliquid showed a small but increasing proportion sourced overseas (non-EU). Solid biomass consignments have significant proportions sourced from UK and ROI[36], EU, and overseas (non-EU), as shown in **Figure 3.4.**

3.16 Gasification stations utilised 1,323.39 million m^3 of syngas in 2019-20. Syngas from sources within UK and ROI accounted for 99.6%, 0.01% came from the EU, and 0.4% from overseas (non-EU). Two consignments of wood pellets were sourced from Russia and one consignment of waste wood from the Netherlands, the only consignments to be sourced from outside UK and ROI.

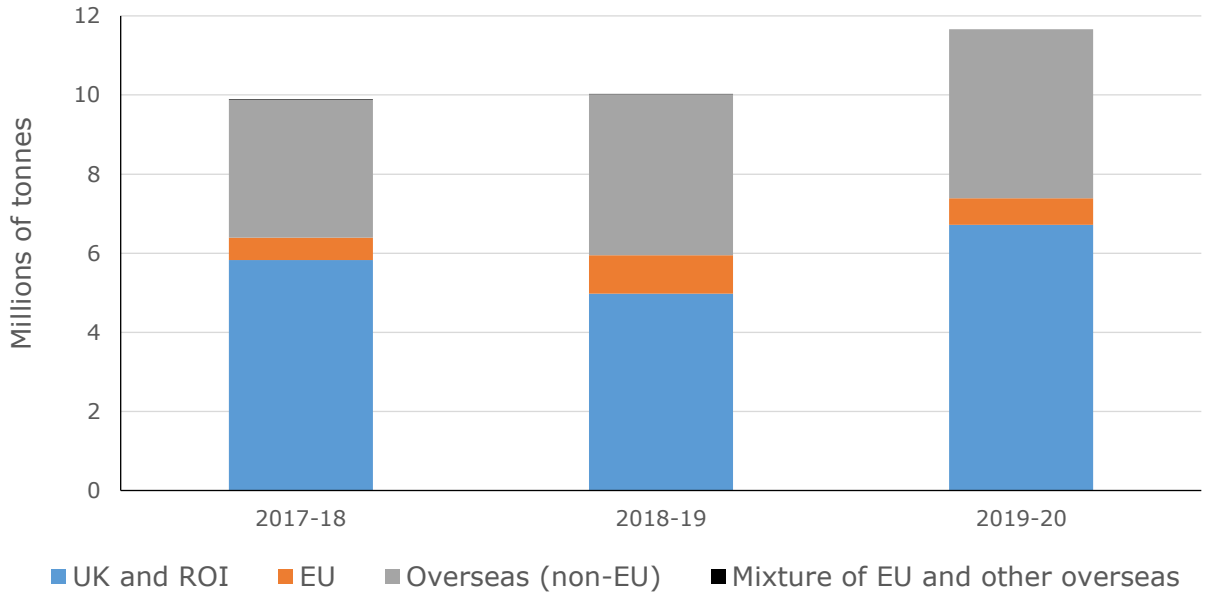
[36] For the purposes of comparison with previous year's datasets, consignments from the UK and ROI have been grouped.

3.17 Anaerobic digestion stations used 525.19 million m^3 of biogas in 2019-20, 99.5% of which was produced using feedstocks sourced within UK and ROI, 0.4% EU, and 0.1% overseas (non-EU). This is consistent with the previous obligation periods. Outside the UK and ROI, a variety of feedstocks were sourced from Canada, France, Indonesia, and Romania.

3.18 Bioliquid stations used 134.20 million litres of bioliquid in 2019-20, 97.7% of this bioliquid was sourced within UK and ROI, 0.2% EU, and 2.1% overseas (non-EU). Outside the UK and ROI, bioliquid was sourced from Brazil, Canada, Germany, and Norway. The proportion of bioliquid from overseas (non-EU) remains a small proportion of the overall quantity but compares to 0% in 2018-19.

3.19 As shown in **Figure 3.4**, compared to 2018-19 we saw an increase in the quantity of solid biomass burnt in direct combustion (11.68 million tonnes). Whilst there has been a reduction in the quantity of biomass that was grown or obtained in the EU, there has been a significant increase in biomass sourced within the UK and ROI.

Figure 3.4: A comparison of the quantities of solid biomass used in fuelled generating stations in the 2017-18 to 2019-20 obligation periods



4. Compliance by licensed suppliers

Chapter summary

In 2019-20, suppliers presented 115.94 million ROCs towards the total UK obligation of 130.18 million ROCs.[37] Those suppliers not meeting their obligation through presenting ROCs by the deadline of 1 September are required to make up the shortfall by making payments into the buy-out fund no later than 31 August. Where this payment deadline is missed suppliers have not met their obligations on time and are required to fulfil any remaining part of their obligation by paying into late payment fund by 31 October. The payments collected resulted in £654.6 million being redistributed to eligible suppliers from the buy-out fund and late payment funds. This was substantially less than the previous record of £841.9 million set in 2018-19. Each ROC was notionally worth £54.43, giving a scheme value of approximately £6.31 billion.

Thirteen suppliers did not meet their obligations, resulting in a shortfall of £33.14m in the buy-out/late payment funds as of the late payment deadline of 31 October 2020. This resulted in mutualisation being triggered on the RO and ROS for the third successive year.[38] An exemption for eligible Energy Intensive Industries (EIIs) from a proportion of the indirect costs of the RO has been in place on the scheme since the 2018-19 year.

4.1 The obligation level is set by the Secretary of State and published by BEIS six months before each obligation period begins.[39] On 28 September 2018, BEIS announced the 2019-20 obligation level applicable for suppliers[40] in:

- Great Britain, requiring suppliers in England, Wales and Scotland to present 0.484 ROCs per MWh of electricity that they supplied to their customers.
- Northern Ireland, requiring suppliers in Northern Ireland to present 0.190 ROCs per MWh of electricity that they supplied to their customers.

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[37] Link to details of 2019-20 RO obligation on the Ofgem website: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-total-obligation-201920>

[38] Threshold to trigger mutualisation is £15.4m for England and Wales, and £1.54m for Scotland.

[39] Articles 12 of the NIRO and ROS 2009 Orders and article 13 of the RO 2015 Order define these calculations to set the obligation.

[40] Link to RO obligation level calculation for 2019-20: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/747218/2019-20-renewables-obligation-level.pdf>

The obligation level by RO jurisdiction[41] is used by Ofgem to calculate the total UK obligation (ie: actual total electricity supplied x relevant obligation level by RO jurisdiction). In 2019-20, the total supply was 265.96 TWh[42] to customers in GB and 7.69 TWh in NI. Using the 2019-20 obligation level and the 2019-20 total electricity supplied figures, this gave a total UK obligation of 130.18 million ROCs. This is an increase of 2.56 million ROCs (2%) from the total UK obligation level of 127.62 million ROCs in 2018-19.

4.2 We set the buy-out price before each obligation period by taking the buy-out price from the previous obligation period and adjusting it in line with the change in the Retail Price Index (RPI)[43] during the previous calendar year. For the obligation period 2019-20 the price was set at £48.78 per ROC – an increase of 3.3% from the 2018-19 value of £47.22.

4.3 The obligation for all 124 suppliers that supplied electricity during the obligation period was set based on their overall supply volumes by RO jurisdiction. Suppliers with an obligation under the RO are not the complete group of licensed suppliers in the UK. Some licensed suppliers did not supply electricity in 2019-20 and so did not have an obligation. A full list of all electricity supply licences in GB is available from the Electronic Public Register on our Licensing website.[44] An equivalent list for NI is on the Northern Ireland Authority for Utility Regulation (UR) website.[45]

Information required by suppliers

4.4 After an obligation period (1 April – 31 March) each licensed supplier must:

- Estimate the amount of electricity it has supplied during the obligation period and submit these figures to us by 1 June,
- Provide us with the final figures for electricity it has supplied by 1 July,
- Comply with its obligations through one or a combination of the options below:
    - Presenting ROCs to us by 1 September,
    - Making a buy-out payment by 31 August for each ROC it has not presented,
    - Making a late payment by 31 October to meet any remaining obligation it has not met by 1 September. Late payments are subject to a daily interest penalty at an

[41] Breakdown of RO jurisdiction is as follows: RO (England & Wales), ROS (Scotland), and NIRO (Northern Ireland)
[42] Excluding 8.97 TWh of electricity supplied to EIIs, which is exempted from the RO.
[43] RPI from the Office of National Statistics <https://www.ons.gov.uk>
[44] Link to list of GB supply licences: <https://epr.ofgem.gov.uk/Document>
[45] Link to list of NI supply licences: <https://www.uregni.gov.uk/electricity-licences>

annualised rate of 5% plus the Bank of England base rate (0.1%) as of the first day of the late payment period.[46]

Validation and submission of supply volumes

4.5 Appendix 5 of the Renewables Obligation: Guidance for Licensed Electricity Suppliers[47] recommends a methodology for suppliers to follow when they report their supply volumes for an obligation period. This states that they should use settlement reports from Elexon[48] for supply in GB, and from Northern Ireland Electricity Networks (NIE)[49] for supply in NI.

4.6 Since 2015, when the new process was first introduced, settlement reports from Elexon and NIE have been obtained by Ofgem before suppliers submit their figures. An extract of the report is sent to each supplier for validation of their supply volumes and, at that stage, suppliers can either accept the figures or justify any variance before submitting their figures.

4.7 In relation to the 1 June estimated data deadline, there was one supplier that submitted their estimated figure after this, and twenty-two that provided no data. For the 1 July final supply data deadline, eleven suppliers submitted figures late[50] and three provided no data. These figures exclude eight suppliers that either had their licence revoked or entered into administration by the estimated or final supply data deadlines. Each of these incidents of non-compliance will be added to the Supplier Performance Report (SPR).[51]

Energy Intensive Industries

4.8 Applicable from the 2018-19 RO year onwards, eligible Energy Intensive Industries (EII) in GB may claim exemption from their energy supplier for up to 85% of the indirect costs of the RO. We use the suppliers' reduced supply volumes to calculate their obligations. Details of eligible EII excluded electricity are in sections 2.6 to 2.9 of our Guidance to Suppliers.

4.9 Twenty-two suppliers supplied 11.24 TWh of EII electricity to their customers in GB – 8.97 TWh of which was excluded as part of their total supply volumes for the purpose of determining their obligations. A summary of such electricity supplied in GB is given in **Table 4.1**

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[46] Defined in article 68(4) of the 2015 RO Order, article 44(4) of the 2009 ROS Order and article 41(4) of the 2009 NIRO Order.

[47] Link to RO guidance for suppliers: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-guidance-suppliers-march-2018>

[48] Link to Elexon website: <https://www.elexon.co.uk/>

[49] Link to NIE website: <https://www.nienetworks.co.uk/home>

[50] The names of suppliers missing the 1 June and 1 July deadlines can be found in Appendix 2.

[51] Link to the supplier performance report: <https://www.ofgem.gov.uk/environmental-programmes/environmental-programmes-ofgem-s-role-and-delivery-performance/environmental-programmes-supplier-performance-report>

Table 4.1: Summary of EIIs supplied in Great Britain

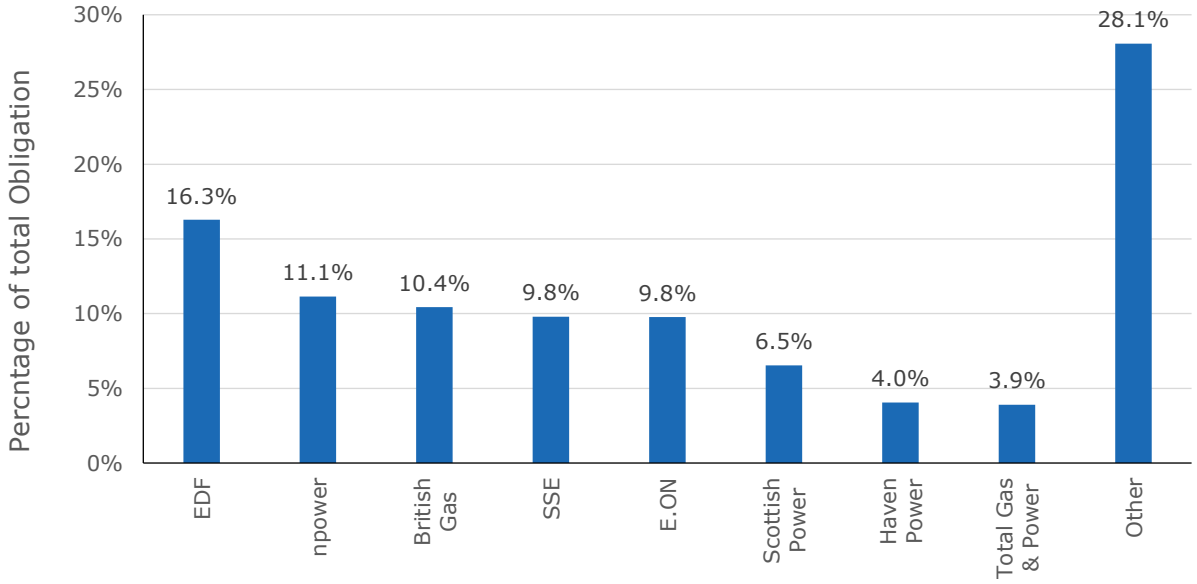
	England & Wales	Scotland	UK total
Total EIIs supply (MWh)	10,201,979.5	1,036,457.0	11,238,436.5
Total excluded EII electricity from obligation	8,101,545.5	864,498.4	8,966,043.9
Percentage of excluded EII electricity from obligation	79.41%	83.40%	79.78%

Share of obligation by suppliers

4.10 **Figure 4.1** shows how the total UK obligation was split between suppliers. Each supplier with a share of the obligation of 3% or above is shown individually, those with a share below 3% are grouped together under 'Other'.

4.11 The six largest suppliers (British Gas, E.ON, EDF, Npower, ScottishPower and SSE) shared 63.96% of the obligation between them, this is down from 68.78% last year. Full details of suppliers' obligations are included in Appendix 2.

Figure 4.1: Proportion of total obligation (RO, ROS, and NIRO combined) by supplier group in 2019-20



Compliance with obligations –

4.12 Suppliers had a total of 238 obligations across the three Orders, 214 obligations of which were met. These included four licensees who supplied ≤ 1MWh of electricity within the relevant reporting period and had a final obligation of zero.

- Suppliers met 86 of the obligations by presenting ROCs alone. Of these, 35 were on the RO, 44 on the ROS, and seven on the NIRO.
- Suppliers met 91 obligations entirely through either buy-out or late payments or a combination of both. Of these, 41 were on the RO, 49 were on the ROS and one was on the NIRO.
- Suppliers met 37 obligations through a combination of buyout/late payments and ROCs.

ROCs presented by Suppliers

4.13 **Table 4.2** summarises the obligation and ROCs presented by suppliers across the Orders. This shows that suppliers presented 115.9 million ROCs to us for compliance in 2019-20. This is an increase of 8.3 million ROCs, or 7.71%, on the 107.64 million they presented in 2018-19.

4.14 Suppliers met 89.1% of the total obligation (130.18 million ROCs) by presenting ROCs (115.94 million) to us. The remaining proportion of the obligation (14.24 million ROCs) was largely met by suppliers making a buyout payment and/or late payment, for a total of £661.35 million. This amount was substantially lower than in 2018-19 (£846.88 million).

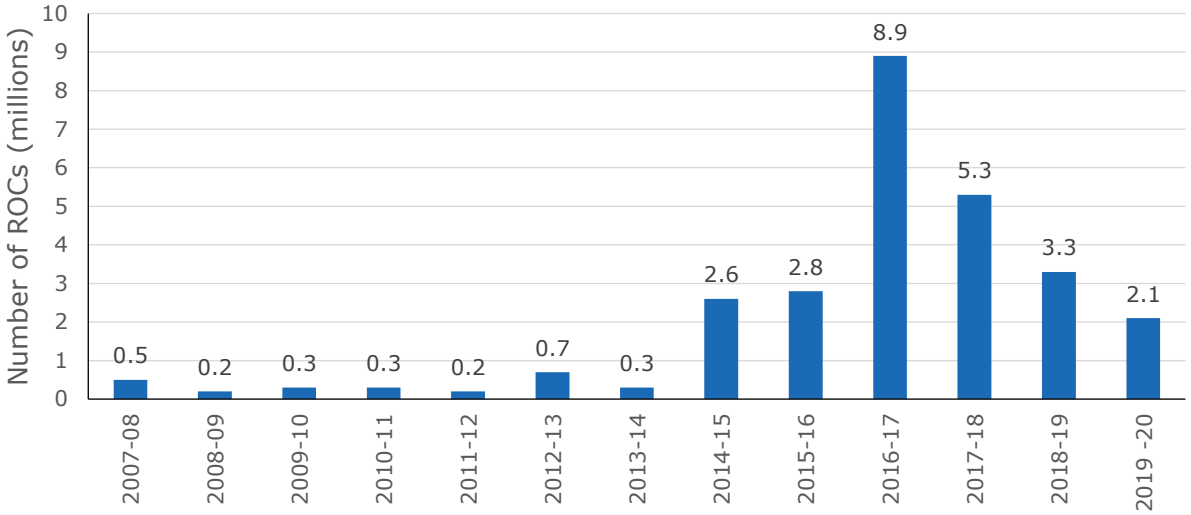
Table 4.2 Summary of ROCs presented towards each UK obligation in 2019-20

	RO	ROS	NIRO	UK total
Electricity supplied (MWh)	241,612,614	24,343,604	7,690,332	273,646,550
Obligation (ROCs)	116,940,506	11,782,299	1,461,163	130,183,968
ROCs presented	103,721,658	10,852,975	1,367,706	115,942,339
Total number of obligations	123	110	9	242
Percentage of obligation met with ROCs	88.7%	92.1%	93.6%	89.1%

4.15 Suppliers can meet up to 25% of an obligation by presenting unused ROCs from the previous obligation period (banked ROCs)[52]. They presented around 2.06 million banked ROCs, down from the 3.3 million presented last year. **Figure 4.2** shows that the number of banked ROCs presented in 2019-20 obligation period is the lowest it has been since the 2013-14 obligation period.

[52] Defined in article 14(2) of the 2015 RO Order and articles 13(2) of the 2009 ROS and NIRO Orders

Figure 4.2: Number of banked ROCs presented each obligation period since 2007-08



4.16 At the time of writing, of the 114.7 million ROCs we issued in 2019-20, more than 800 thousand ROCs were not presented by suppliers. These will be available as banked ROCs for the 2020-21 compliance period.

4.17 There is a cap on the amount of ROCs from electricity generated from bioliquids that suppliers can present towards their obligations. This limits suppliers to meeting 4% of an obligation using bioliquid ROCs. Some bioliquid ROCs are exempt from the cap. Details of the exemptions are in section 4.5 of our Guidance for Suppliers.

4.18 In 2019-20 suppliers presented 235,812 bioliquid ROCs to us, across the obligations, which qualified under the cap. This is 0.18% of the total obligation, well below the 4% cap. Suppliers also presented 2,718,830 bioliquid ROCs towards their 2019-20 obligation that were exempt from the cap. This represents around a 2.2% increase on those presented by suppliers in the 2018-19 obligation period.

4.19 **Table 4.3** summarises all bioliquid ROCs presented by suppliers towards their obligations by RO year. This is effective from the 2013-14 RO year, when the cap on the number of bioliquid ROCs a supplier can present towards its obligation was first introduced.

Table 4.3: Summary of qualifying and non-qualifying bioliquid ROCs presented by suppliers towards their obligations since the 2013-14 RO year

Compliance Period/RO Year	No. of Bioliquid ROCs submitted by suppliers which are exempt from the 4% cap	No. of Bioliquid ROCs submitted by suppliers which are included in the 4% cap	Total qualifying and non-qualifying Bioliquid ROCs presented
CP12 – 2013-14	851,836	143,498	995,334
CP13 – 2014-15	874,999	29,301	904,300
CP14 – 2015-16	1,352,131	58,973	1,411,104
CP15 – 2016-17	1,707,067	87,290	1,794,357
CP16 – 2017-18	2,180,927	181,429	2,362,356
CP17 - 2018-19	2,659,159	254,106	2,913,265
CP18 - 2019-20	2,718,830	235,812	2,954,642

Payments made

4.20 Sixty-two suppliers who chose to make buy-out payments paid a total of £588,484,859 into the buy-out fund by the legislative deadline of 31 August.

4.21 Across the schemes, 33 suppliers covering 55 obligations did not meet the deadline for making buy-out payments. All but 13 suppliers (as noted in section 4.24) complied with their obligations by making late payments by 31 October, totalling £72,868,263.

4.22 **Table 4.4** summarises the payments suppliers made towards each UK obligation in 2019-20. Full details of how all suppliers met their obligations are in Appendix 2.

Table 4.4: Payments made by suppliers towards each UK obligation for 2019-20

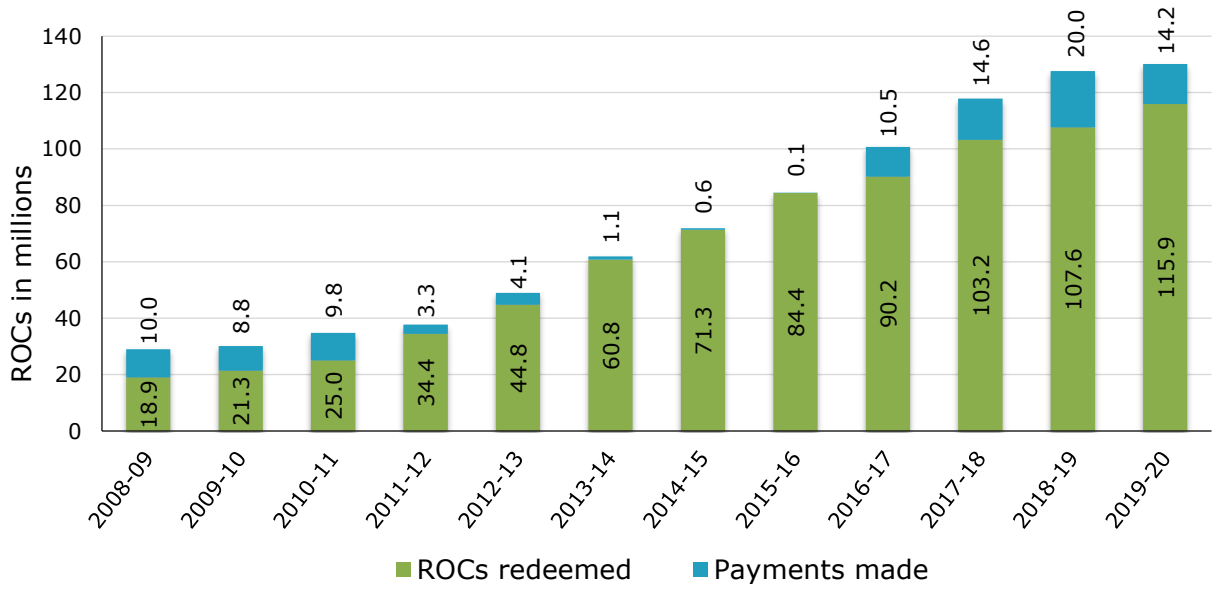
	RO	ROS	NIRO	UK total
Buy-out payments made	£544,241,351	£39,684,676	£4,558,832	£588,484,859
Late payments made	£68,974,271	£3,893,992	£0	£72,868,263
Total	£613,215,622	£43,578,668	£4,558,832	£661,353,122

4.23 **Figure 4.3** shows the trend in total UK obligation and the proportions met through ROCs and payments respectively since 2008-09. The height of the columns represents the total obligation each year. The green sections represent the proportion of the obligation that suppliers met by presenting ROCs; the blue sections represent the remaining proportion[53] of the obligation suppliers largely met by making buyout payments. This shows a significant drop in the proportion met by ROCs in 2016-17, 2017-18 and 2018-19 when compared to the

[53] In some RO years, a very small fraction of this remaining proportion of the obligation was not fulfilled by suppliers making buyout and/or late payments, and thus has been left undischarged. For the 2019-20 RO year this was more significant, thereby triggering the mutualisation process for the third time in the RO's history – details of which are provided from paragraph 4.42.

corresponding proportion for each of the last five pre-2016-17 RO years. The proportion met by ROCs in the 2019-20 year however has increased compared with the 2018-19 year. For further details around the total shortfall amount across all RO schemes, please refer to paragraph 4.46.

Figure 4.3: Trend in UK obligation and proportion met through ROCs and payments since 2008-09



Non-Compliance with Obligations

4.24 As reported on our website,[54] 13 suppliers with a total obligation of 706,256 ROCs did not comply with their obligations. Ten suppliers (listed below), with a total obligation of 369,966 ROCs, ceased trading during the 2019-20 Compliance Round. These suppliers did not make payments or present ROCs towards their obligations.

- Breeze Energy Supply Limited
- Effortless Energy Ltd
- Electraphase Limited
- Eversmart Energy Limited
- GnERGY Limited
- Rutherford Energy Supply Limited
- Snowdrop Energy Supply Limited
- Solarplicity Supply Ltd
- Tonik Energy Limited

[54] Link to details of 2019-20 Late payment distribution: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-late-payment-distribution-2019-2020>

- TOTO Energy Limited

4.25 We are pursuing outstanding balances for suppliers who have ceased trading, or are in the process of exiting the market through their administrators

4.26 Three suppliers (Symbio, Robin Hood and Nabuh) with a total obligation of 336,290 ROCs, failed to discharge their obligations in full by the 31 October legislative deadline. Symbio made a partial buyout and late payments ahead of the 31 October deadline totalling £1,162,715.08[55].

4.27 All instances of non-compliance will be added to the Supplier Performance Report (SPR)[56].

Enforcement

4.28 We take non-compliance with scheme obligations very seriously and took a robust and proactive approach to compliance and enforcement on the RO scheme. We maintained a high level of engagement with obligated suppliers in order to ensure deadlines and amounts due were clear, and set out the consequences of non-compliance.

4.29 This included early communication with suppliers to seek assurances that they would be able to discharge their obligations under the RO this year. This was augmented by requests to suppliers, who failed to discharge their obligations by the 1 September 2020 deadline, for evidence of ability to make payment in full by the 31 October 2020 late payment deadline. Where no evidence or insufficient evidence was submitted, we issued consultations on proposals to make Final Orders[57] . Proposals were published for:

- Co-operative Energy Limited
- Flow Energy Limited
- MA Energy Limited
- Nabuh Energy Limited
- Robin Hood Energy Limited
- Symbio Energy Limited
- Tonik Energy Limited

4.30 We proceeded to make Final Orders in respect of Nabuh Energy Limited, Robin Hood Energy Limited and Symbio Energy Limited. The Final Order imposed on Symbio Energy

[55] Symbio went on to pay in full as discussed in paragraph 4.30.

[56] Link to Supplier Performance Report webpage: <https://www.ofgem.gov.uk/environmental-programmes/environmental-programmes-ofgem-s-role-and-delivery-performance/environmental-programmes-supplier-performance-report>

[57] Link to press release on enforcement action: https://www.ofgem.gov.uk/publications-and-updates/ofgem-proposes-orders-pay-34-million-renewables-obligations-and-feed-tariff-payments

Limited on 28 October 2020 was revoked, as Symbio Energy Limited paid its RO obligation in full on 10 November 2020. We did not issue Final Orders for Co-operative Energy Limited, Flow Energy Limited and MA Energy Limited as they paid in full before the late payment window closed. As Tonik Energy Limited ceased treading, the Authority took the decision not to proceed with issuing a Final Order.

4.31 Full details of the Final and Provisional Orders are available on the Enforcement team's webpage.[58]

Redistribution of the buy-out and late payment funds

4.32 We redistribute the buy-out and late payment funds to suppliers using the single recycling mechanism. This means that we pay out the aggregate of the funds across the three obligations to suppliers in proportion to the number of ROCs each supplier presented across the three Orders. For example, a supplier who presents 3% of the total ROCs across the three obligations will get back 3% of the amount we redistribute from the buy-out and late payment funds. This is the case regardless of the Order under which a supplier had its obligations. So, for example, a supplier who only has an obligation in England and Wales will still receive part of the Scotland and Northern Ireland payment funds.

Table 4.5: Summary of redistribution payments

	RO	ROS	NIRO	UK total
Buy-out payments	£537,980,635	£39,228,213	£4,507,736	£581,716,584
Late payments	£68,984,384	£3,895,075	£229	£72,879,688
Totals	£606,965,019	£43,123,288	£4,507,965	£654,596,272

4.33 As **Table 4.5** summarises, the combined sum redistributed to suppliers from the buy-out and late payment funds was approximately £654.6 million. Full information on payments made to individual supply licences is included in Appendix 2. Before making redistribution payments we withdrew £6.7 million for our scheme administration costs[59] from the buy-out fund, accounted for interest accrued on the buy-out payments while in our accounts, and rounded the redistribution amounts down to the nearest whole pound. We made the redistribution payments on 16 October 2020[60], in advance of the legislative deadline of 1 November.

[58] Link to details of final and provisional orders: <https://www.ofgem.gov.uk/investigations/provisional-orders-and-final-orders>

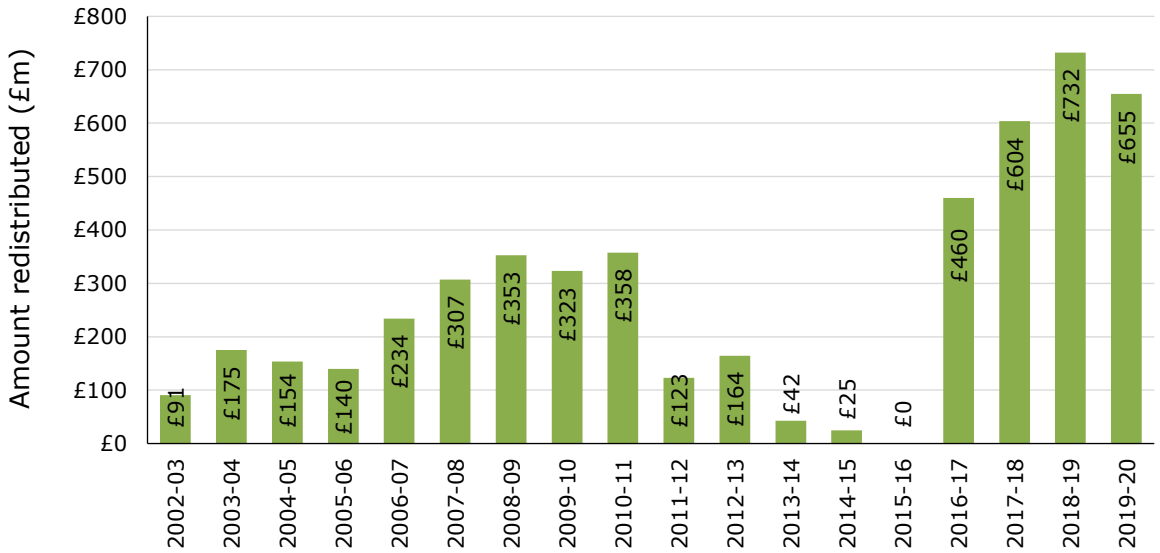
[59] This represents an increase of 20.6% over the cost of administration in 2019-20, however this remains around 0.1% of the estimated value of the scheme. This includes NIRO costs (£1,331,008) and RO GB costs (£5,346,411).

[60] Details of ROCs presented towards UK obligation: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-rocs-presented-and-redistribution-buy-out-fund-2019-20>

4.34 We redistributed £72.88 million in late payments, on the same basis as the buy-out funds (though without the withdrawal of administration costs) on 4 December 2020. This was in advance of the legislative deadline of 1 January 2021.

4.35 **Figure 4.4** shows the amounts we have redistributed each year since the scheme's introduction in 2002.

Figure 4.4: Total redistributed to suppliers since 2002-03



4.36 Following an open consultation with suppliers and interested stakeholders in March 2020[61], we introduced a new approach to recycling additional late payments to eligible suppliers, received after the late payment deadline in years when mutualisation is triggered. This will now involve redistributing the additional late payments to suppliers in proportion to the total mutualisation payment each supplier is responsible for making (ie if supplier A is due to make 2% of the total year's worth of mutualisation payments, they will receive 2% of the payments received after the late payment deadline).

4.37 The new approach as mentioned at 4.36 was first adopted on 15 January 2021 when Ofgem recycled an additional 2019-20 late payment of £507,369.57, received from one

[61]For details regarding this new approach, please refer to this page on our website: <https://www.ofgem.gov.uk/publications-and-updates/open-letter-payments-received-after-renewables-obligation-ro-late-payment-deadline>

supplier after the late payment deadline had passed. Details of this are published on the Ofgem website[62].

ROC recycle value

4.38 As suppliers presented 115.9 million ROCs, this means the ROC recycle value (the amount that suppliers received back for each ROC they presented) for the 2019-20 obligation period was £5.65. When added to the buy-out price of £48.78 for each ROCs they presented, the total notional worth of a ROC for this obligation period was £54.43. Suppliers will receive a further mutualisation recycle value once the mutualisation process for this compliance period is complete.[63]

4.39 **Table 4.6** summarises the ROC recycle value and support per MWh supplied since 2010-11. The total value of the scheme in an obligation period is the worth of a ROC multiplied by the number of ROCs presented for compliance by suppliers. In 2019-20 suppliers presented 115.9 million ROCs each worth £54.43 giving a scheme value of £6.31 billion. The growth in scheme value can be seen in **Figure 4.5**.

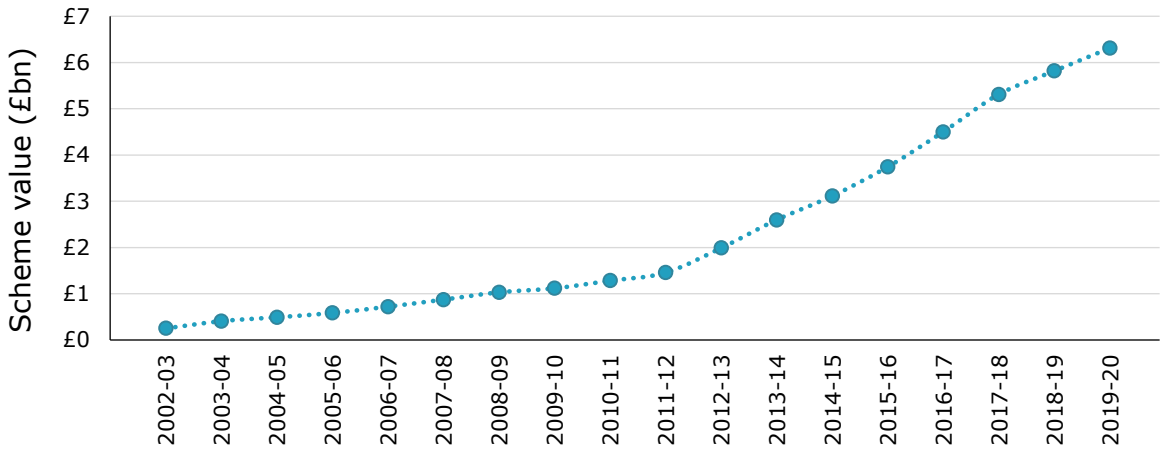
Table 4.6 Determination of ROC recycle value since 2010-11

	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
Total of buy-out and late payments redistributed	£358m	£123m	£164m	£42m	£25m	£0m	£460m	£604m	£842m	£655m
Total ROCs presented (m)	25.0m	34.4m	44.8m	60.8m	71.3m	84.4m	90.2m	103.2m	107.6m	115.9m
Recycle value per ROC presented	£14.35	£3.58	£3.67	£0.70	£0.35	£0.00	£5.10	£5.85	£7.82	£5.65
Worth of a ROC to a supplier	£51.34	£42.27	£44.38	£42.72	£43.65	£44.33	£49.87	£51.43	£55.04	£54.43
Average ROCs issued/MWh	1.07	1.12	1.27	1.27	1.28	1.31	1.32	1.34	1.34	1.35
Support per MWh supplied	£54.93	£47.34	£56.36	£54.25	£55.87	£58.07	£65.83	£68.92	£73.75	£73.48

[62] Renewables Obligation: January 2021 Additional Payment Distribution <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-january-2021-additional-payment-distribution-november-2020>

[63] Further details on mutualisation are given from section 4.42 onwards

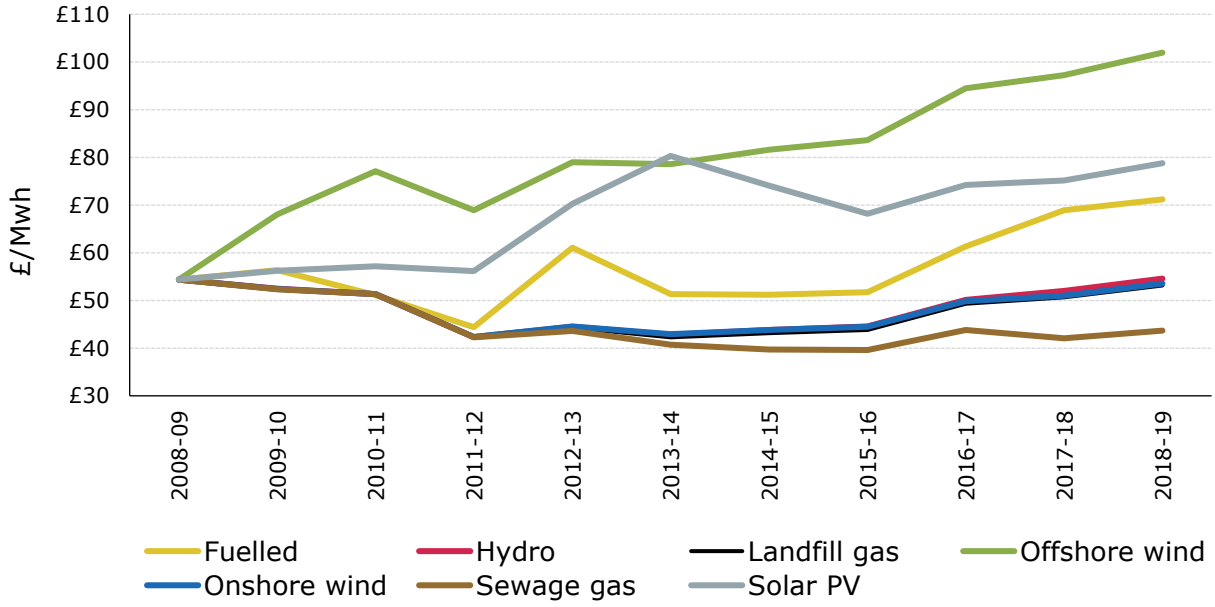
Figure 4.5: Growth in scheme value since 2002-03



4.40 The average number of ROCs issued per MWh (from **Table 4.6**) multiplied by the worth of a ROC gives the support (in £) per MWh generated for an obligation period. These are shown in the bottom row of the table.

4.41 **Figure 4.6** shows the cost of support in £ per MWh broken down by technology type. The chart begins in 2008-09, before banding was introduced[64], when all technologies received one ROC per MWh generated. The most obvious change from last year is the small increase in the cost of support per MWh for each technology type.

Figure 4.6: Cost of support per MWh for each technology since 2008-09



**Tidal and wave power are not included here due to the very small number of ROCs each technology has received*

[64] Banding came into force on 1 April 2009.

Mutualisation

4.42 If a supplier/suppliers are unable to meet their obligations under the RO or ROS there may be a shortfall in the late payment fund. The mutualisation provisions in RO legislation[65] are designed to account for this. Mutualisation is triggered above a certain threshold, known as relevant shortfall,[66] the amount of which is equal to or more than £15.4m for the RO and £1.54m for ROS. Mutualisation does not apply in Northern Ireland.

4.43 If mutualisation is triggered, suppliers that fully or partially discharged their obligations under the RO and ROS must make additional payments to make up the shortfall. These payments are capped at the mutualisation ceiling; an amount we publish every year before the start of the obligation period. We adjust this in the same way as the buy-out price, in line with the change in RPI from the previous calendar year.

4.44 The mutualisation ceilings for 2019-20 were £293,831,481.82 in England and Wales and £29,383,148.18 in Scotland.

4.45 Mutualisation payments are redistributed to suppliers on the same basis as the buy-out and late payment funds, using the single recycling mechanism to 'UK compliant suppliers'. These are suppliers who have presented ROCs within the relevant compliance period and have discharged their obligation in full by the late payment deadline of 31 October. Although mutualisation does not apply in NI, NI suppliers will receive a share of any mutualisation funds from the RO and ROS.

4.46 In 2019-20, 13 suppliers did not meet their obligations in full. This resulted in a total shortfall of £33,135,933.32, (excluding interest) distributed across the schemes, as follows:

- RO: £31,351,365.80
- ROS: £1,784,567.52
- NIRO: £0

4.47 The resulting shortfall triggered mutualisation for both RO and ROS. In line with the RO Orders, suppliers who discharged all or part of their obligation have been contacted to make quarterly payments to make up the shortfall, in proportion to their obligation. The first of these payments will be due by 31 August 2021. The latest updates on all mutualisation activity are published on our 'RO Publication and updates' webpage[67] whereas further information on

[65] Mutualisation is described in articles 72 – 77 of the 2015 RO Order and articles 48 – 52 of the 2009 ROS Order.
[66] Article 72 in the 2015 RO Order and Schedule 3 in the 2009 ROS Order define the amount of relevant shortfall.
[67] RO Publications and updates: <https://www.ofgem.gov.uk/environmental-programmes/ro/contacts-publications-and-data>

mutualisation can be found within chapter 7 of our Renewables Obligation: Guidance for Suppliers[68].

4.48 In recent RO years when mutualisation has been triggered, Ofgem has occasionally received late payments from defaulting suppliers after the Late Payment deadline of 31 October has passed. Following an open consultation[69] with suppliers and interested stakeholders, it was decided that when recycling these payments to eligible suppliers it shall be in proportion to the total mutualisation payments each supplier is responsible for making (ie if supplier A is due to make 2% of the total year's worth of mutualisation payments, they will receive 2% of the payments received after the late payment deadline). This methodology was first adopted on 15 January 2021 when Ofgem redistributed an additional 2019-20 late payment of £507,369.57 received from one supplier after the late payment deadline had passed.[70]

[68] Link to RO guidance for suppliers: https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-guidance-suppliers-march-2018

[69] Link to Open Letter - Payments received after Renewables Obligation (RO) late payment deadline <https://www.ofgem.gov.uk/publications-and-updates/open-letter-payments-received-after-renewables-obligation-ro-late-payment-deadline>

[70] Details of the late, late payment redistribution are available on the Ofgem website: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-january-2021-additional-payment-distribution-november-2020>

5. Audits and counter fraud

Chapter summary

The 2019-20 audit programme consisted of targeted generator audits being conducted on 108 stations in the UK; more than two thirds of these (70%) were rated either 'weak' or 'unsatisfactory'. For micro-generators[71] in Northern Ireland we conducted a further 43 audits. Almost 33% were identified as having significant discrepancies and/or missing information which could potentially affect their accreditation status and/or ROC issue. Audits were also conducted on four licensed suppliers where 50% were rated either 'weak' or 'unsatisfactory', and three agent or 'rent-a-roof' companies where all were rated either 'good' or 'satisfactory'.

5.1 We conduct audits on both accredited generating stations and those applying for accreditation. The aim of auditing pre-accreditation generating stations is to verify information submitted and evidence provided in support of the accreditation application, prior to a determination being made regarding eligibility. Accredited generating stations are audited to ensure they remain compliant according to scheme legislation and guidance. Auditors will check various elements which may include commissioning evidence, metering arrangements and ROC claims.

5.2 Audits enable Ofgem to ensure that generating stations continue to meet the scheme eligibility requirements. The audits also provide assurance that the correct number of ROCs have been issued and that the information we hold is current. Furthermore, the audits help identify errors and potentially fraudulent activity.

Each audit receives an assurance rating which is dependent on the findings. The ratings are as follows:

- **Good** (no issues identified at audit)
- **Satisfactory** (minor issues or instances where best practice is not followed)
- **Weak** (the audit identified moderate issues of non-compliance)
- **Unsatisfactory** (major instances of non-compliance or suspected fraud identified)

[71] Micro generators are those with a DNC of 50kW or less. Micro generators are only eligible for the RO in NI and are referred to as Micro-NIRO.

5.3 Following an audit, a report is issued to the generator who then works with Ofgem to ensure that findings are satisfactorily resolved and that any evidence which remains outstanding is provided. In the event of any potential non-compliance, error or fraud being identified, Ofgem investigates thoroughly and, where appropriate, can withdraw accreditation, change a station's ROC banding, and make amendments to ROC issue. Audits are closed when all outstanding findings have been resolved. Ofgem can temporarily suspend ROC issue whilst awaiting further evidence to be provided or for corrective actions to be taken. If fraudulent activity is suspected, Ofgem can refer cases to Action Fraud and law enforcement agencies.

2019-20 Generator Audits

5.4 In 2019-20, our external auditor carried out 108 generating station audits (>50kW DNC). Seven of the audited generating stations were based in Scotland, 64 in Northern Ireland (where the higher number of audits was primarily due to the targeting of Off Grid (OG) and Zero Export (ZE) stations)[72], and 37 in England or Wales. All of these audits were targeted based on either concerns identified through our internal processes, or known risk areas in the scheme population. **Figure 5.1** shows the breakdown of the audits by country and the rating given by the auditor. **Table 5.1** shows the breakdown of technologies, the type of audit and the ratings received for each.

Figure 5.1: Audit Ratings by Country 2019-20

[72] See paragraph 5.6.

Table 5.1: Technologies and audit types in 2019-20

Technology	Audit Type	Good	Satisfactory	Weak	Unsatisfactory	Totals
Fuelled	Pre-accreditation	0	5	4	9	18
	Accredited	0	9	17	7	33
Hydro	Pre-accreditation	0	0	0	0	0
	Accredited	0	0	1	0	1
Landfill Gas	Pre-accreditation	0	0	0	0	0
	Accredited	0	0	1	0	1
Off-shore Wind	Pre-accreditation	0	0	0	0	0
	Accredited	0	0	2	0	2
On-shore Wind	Pre-accreditation	0	1	1	3	5
	Accredited	0	13	15	4	32
Solar PV	Pre-accreditation	0	0	1	1	2
	Accredited	0	4	5	4	13
Co-firing of biomass with fossil fuel	Pre-accreditation	0	0	0	0	0
	Accredited	0	0	1	0	1
Totals		0	32	48	28	108

5.5 The proportion of 'weak' and 'unsatisfactory' audit ratings decreased from 76% in 2018-19 to 70% in 2019-20. We would expect a high level of non-compliance due to the audits being targeted. The most common findings were discrepancies with the accreditation application, meters calibrated over 10 years ago, discrepancies with the TIC/DNC, unable to confirm the commissioning date due to insufficient evidence, outstanding documents and over/under-claiming of ROCs.

5.6 In order to gather additional assurance, we also undertook audits of 51 OG and ZE generating stations in 2019-20, 49 of which were located in Northern Ireland. This was due to concerns around an increased risk of non-compliance with these types of generating station. 75% of these audits were rated 'weak' or 'unsatisfactory', with the most common audit findings relating to significant outstanding information, uncertainty over the commissioning date and potential connection with an adjacent Renewables Obligation installation. At the time of writing we have closed 23 of these audits and we are still working with the generators on the remaining audits.

2019-20 Northern Ireland Micro Generator Audits

5.7 Solar PV micro-generators are audited to verify information and documents provided in relation to commissioning and metering.

5.8 In 2019-20, 43 audits were conducted on solar PV micro-generators in Northern Ireland. For 29 of the 43 audits, the auditors reported mainly minor discrepancies which required action but did not affect the accreditation status. The remaining 14 audits reported significant discrepancies and/or missing information which could potentially affect the

accreditation status and/or ROC issue. We are working through these audit reports to resolve the findings.

2019-20 Northern Ireland Agent and 'Rent-a-Roof' (RAR) Audits

5.9 Agent and rent-a-roof (RAR)[73] audits are conducted to provide assurance that there are effective processes in place to ensure accurate accreditation data is provided, and that there is sufficient scrutiny of generation data and meter readings, to ensure accurate data submissions to Ofgem. The audits also provide assurance that the company has permission to act on behalf of the generating stations within their portfolio.

5.10 In 2019-20, one rent-a-roof and two agents were audited. The assurance ratings used for agents and rent-a-roofs are the same assurance ratings used for generating station audits. The auditors assigned one rating of 'satisfactory' and two 'good'. Once reports have been issued, we work with the agents and rent-a-roofs to address the findings from the audits.

2019-20 Supplier Audits

5.11 Supplier audits are conducted each year to gain assurance on the accuracy of the electricity figures submitted to us by suppliers (in this case covering the period 2018-19) and to ensure suppliers' internal processes are robust. The audits also aim to prevent/reduce the number of submissions with errors and to deter fraudulent activity.

5.12 The audits were targeted based on criteria which include large suppliers, new suppliers, those where we have concerns over internal processes and those where we have concerns over the accuracy of supply volumes being reported.

5.13 In 2019-20, four suppliers were audited. The assurance ratings used for generator audits are also used for supplier audits. Of the four audits, two were rated 'good', one rated 'weak' and one 'unsatisfactory'.

5.14 The main findings related to inaccuracies in processes, a lack of risk assessments or independent assurance activities taking place, issues with users and information held on the R&CHP Register and the robustness of the controls in place around compiling, and checking the submission of data to Ofgem. The audit reports also made recommendations for best practice, which suppliers are encouraged to implement. Reports have been issued and Ofgem is currently working with the suppliers to address the findings of the audits.

[73] Rent-a-roof companies offer solar PV panels to homeowners, in exchange for the income generated as a result of participation in the NIRO scheme. Agents represent a number of generators, who act on their behalf to submit data and receive ROCs.

Participant compliance

5.15 When concerns have been identified regarding the eligibility of a generating station, an investigation is undertaken to determine if compliance action is required. The compliance actions that Ofgem can take are outlined in the Orders[74].

5.16 We may suspend accreditation or refuse to issue ROCs to a generating station before a final compliance decision has been made if the operator fails to meet their obligations or conditions of accreditation. During the 2019-20 obligation period we refused to issue ROCs to 33 generating stations as the operators were unable to satisfy the requirements of our information requests.

5.17 In the 2019-20 obligation period, a total of seven investigations on accredited generating stations were closed, with one of these cases resulting in compliance action. One investigation resulted in a change to the effective date of accreditation, this was based on information relating to the commissioning date of the station being incorrect in a material particular. The commissioned date and the effective date of accreditation were amended to reflect the commissioning evidence resulting in the station over claiming 18 ROCs. Subsequently Ofgem refused to issue these ROCs against their claim, which had an estimated value of £878.04.

5.18 The operators of the remaining six generating stations submitted satisfactory evidence which addressed the concerns raised in the investigation. Therefore, these cases were closed with no compliance action taken.

Counter fraud

5.19 During the 2019-20 obligation period we processed 10 referrals of suspected fraud on the GB RO schemes and 12 on the NIRO scheme, this is a slight decrease on the previous year.

5.20 As a result of these referrals, two GB RO suspected fraud investigations[75] were opened. One of these has been closed due to insufficient evidence to substantiate an allegation of fraud and the other case is still on-going.

5.21 Three investigations were opened in relation to pending and accredited NIRO installations. Two of these investigations have been concluded. There was evidence to support

[74] Article 90 of the RO, Article 58 of the ROS and Article 50 of the NIRO.
[75] A case or investigation can involve more than one generating station.

the allegation of fraud in one case and insufficient evidence in the other. The third case is still on-going.

5.22 These cases meant we conducted investigations into a total of 76 generating stations across GB and NI.

6. Generators accredited

Chapter summary

Although the Renewables Obligation scheme closed to new entrants prior to the start of the 2019-20 year, the number of accredited stations increased as the accreditation assessment of stations with earlier accreditation dates concluded. On 29 October 2020 when data was extracted for this report[76], 26,582 stations had been accredited with a total generating capacity of 35.4GW. This is an increase of 57 stations and 234MW from the figures reported in the 2018-19 annual report.

6.1 We make a number of general assumptions on the data used within this section of the report, detailed below. These are the same assumptions applied since the 2014-15 RO Annual Report.

- When we refer to a station's accreditation date, we mean the date that the station's accreditation became effective regardless of when we processed the application.
- We only include data on generating stations that have received full accreditation. We have not included any information on stations with preliminary accreditation, nor those that have had their accreditation withdrawn so the data are subject to change year on year.
- References to "fuelled" generating stations relate to stations generating electricity from eligible biomass, bioliquids, biogas, energy crops or waste, but do not include landfill gas and sewage gas only stations.
- The capacities we quote are Declared Net Capacity (DNC),[77] rather than Total Installed Capacity (TIC),[78] values unless specified otherwise. The main exception to this is fuelled generating stations that burn renewable fuel alongside fossil fuel (we term these co-firing stations).

[76] For information on extracting data from the public reports please refer to Appendix 3.

[77] DNC means "the maximum capacity at which the station could be operated for a sustained period without causing damage to it (assuming the source of power used by it to generate electricity was available to it without interruption) less the amount of electricity that is consumed by the plant".

[78] TIC means "the maximum capacity at which the station could be operated for a sustained period without causing damage to it (assuming the source of power used by it to generate electricity was available to it without interruption)".

- To determine the capacity of a fuelled station we calculate the renewable proportion of the electricity generated by the station. Further information on the methodology we use for this can be found in Appendix 1.

Micro generation

6.2 From 1 April 2010, with the introduction of the Feed–in Tariffs (FIT) scheme in GB, all wind, solar PV, hydro and anaerobic digestion (AD) stations with a DNC of 50kW or less (micro generators) became ineligible for the RO. Since no FIT scheme exists in NI, micro generators were still able for apply for accreditation under the NIRO. A large majority of the total number of accreditations granted on the RO have been for such stations. Given this, when reporting on the number and type of stations accredited, we have separated out the micro NIRO stations from some of the information in this chapter.

Total stations accredited

6.3 As shown in **Table 6.1** there were 26,582 stations accredited under the RO when data was extracted from the Renewables & CHP Register on 29 October 2020. The combined capacity of these stations was 35.4GW. This is a modest increase on the figures reported in last year's report - 26,525 stations accredited and 35.2GW capacity. Micro NIRO stations account for 22,675 (85.3%) of the total, but only 121.4MW (0.3%) of accredited capacity.

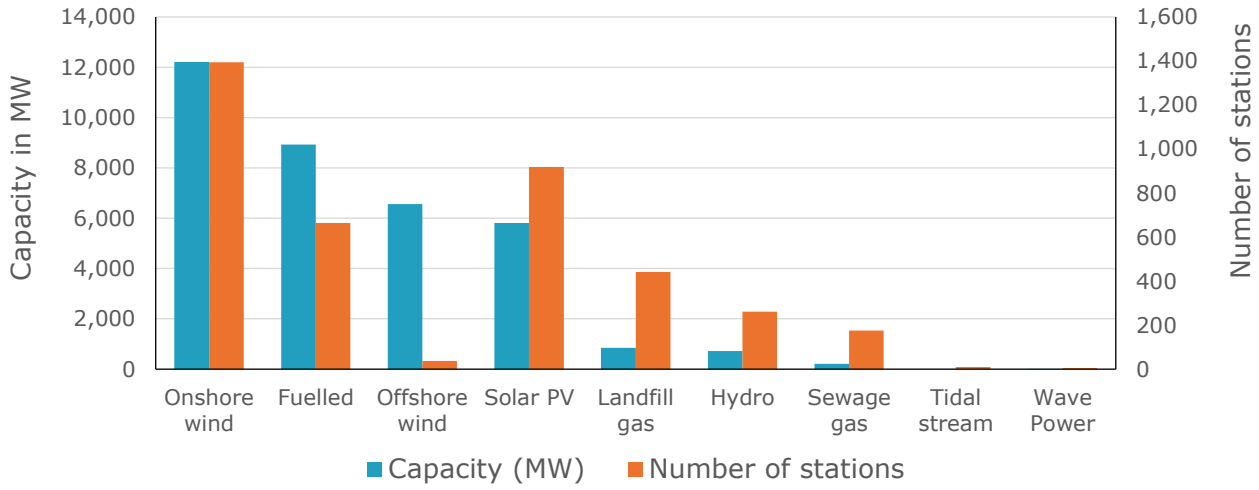
Table 6.1: Accredited stations and capacity by country and technology

Generation Technology	England		Scotland		Wales		Northern Ireland		Total	
	Quantity	Capacity (MW)	Quantity	Capacity (MW)	Quantity	Capacity (MW)	Quantity	Capacity (MW)	Quantity	Capacity (MW)
Onshore wind	238	2,595	252	7,401	58	977	1,284	1,244	1,832	12,217
Fuelled	399	7,899	86	275	53	148	130	604	668	8,926
Offshore wind	28	5,478	7	364	3	720	0	0	38	6,562
Solar PV	786	5,119	15	41	80	486	22,221	276	23,102	5,922
Landfill gas	377	725	39	81	17	26	8	11	441	843
Hydro	47	22	148	619	30	77	87	7	312	725
Sewage gas	153	189	6	7	16	12	0	0	175	208
Tidal stream	0	0	7	12	1	0.4	1	1	9	14
Wave Power	0	0	5	3	0	0	0	0	5	3
Total	2,028	22,026	565	8,803	258	2,447	23,731	2,143	26,582	35,419

6.4 **Figure 6.1** provides a snapshot of the capacity accredited under the scheme (excluding micro NIRO) and the corresponding number of stations. Onshore wind has the most capacity (12,213MW) and number of stations (1,394) giving an average capacity of 8.76MW. Offshore wind with a total of 6,561MW and only 38 stations has a much larger average capacity of

172.68MW capacity. Fuelled and solar PV stations also have relatively large average capacities – 13.44MW and 6.32MW respectively. The average size of stations for the other technology types are smaller - hydro (2.76MW), landfill gas (1.91MW), tidal stream (1.52MW), sewage gas (1.20MW) and wave power (0.67MW).

Figure 6.1: Total accredited capacity and number of stations by generation technology (excluding micro NIRO)



6.5 As shown in **Table 6.2** by far the most common micro NIRO technology is solar PV, making up 97.8% of all micro accreditations and accounting for 96.0% of installed micro capacity. After this, onshore wind is the most common technology making up just under 2% of stations and 3.1% of installed capacity.

Table 6.2: Micro NIRO accredited capacity and number of stations by generation technology

	Generation Technology			
	Solar PV	Onshore wind	Hydro	Fuelled
Sum of capacity (MW)	116.5	3.8	0.9	0.2
Number of stations	22,183	438	50	4

Application approvals

6.6 One of our key duties as scheme administrators is to assess applications for accreditation against the scheme eligibility criteria. As the scheme closed to all new generation capacity on 31 March 2019, it has not been possible for stations to have an accreditation date after this date.[79] However, we continue to assess the eligibility of applications with accreditation dates prior to 31 March 2019.

[79] Link to information on the RO closure: <https://www.ofgem.gov.uk/environmental-programmes/ro/about-ro/ro-closure>

6.7 As shown in **Figures 6.2 & 6.3**, since the last annual report there are an additional 57 stations accredited on the scheme and the total capacity installed has grown by 234MW. Please note that these figures are the net change in stations accredited and installed capacity (including micro NIRO). As well as stations or additional capacity being approved onto the scheme, the totals can be affected by stations withdrawing from the scheme or the capacity of a station changing. For example, as a result of decommissioning a wind turbine or a capacity correction being made following an audit. This is why in **Figure 6.3** you can see a reduction in capacity for sewage gas and solar PV, and a reduction in stations accredited and capacity for landfill gas.

Figure 6.2: Accredited station and capacity change by country (net change)

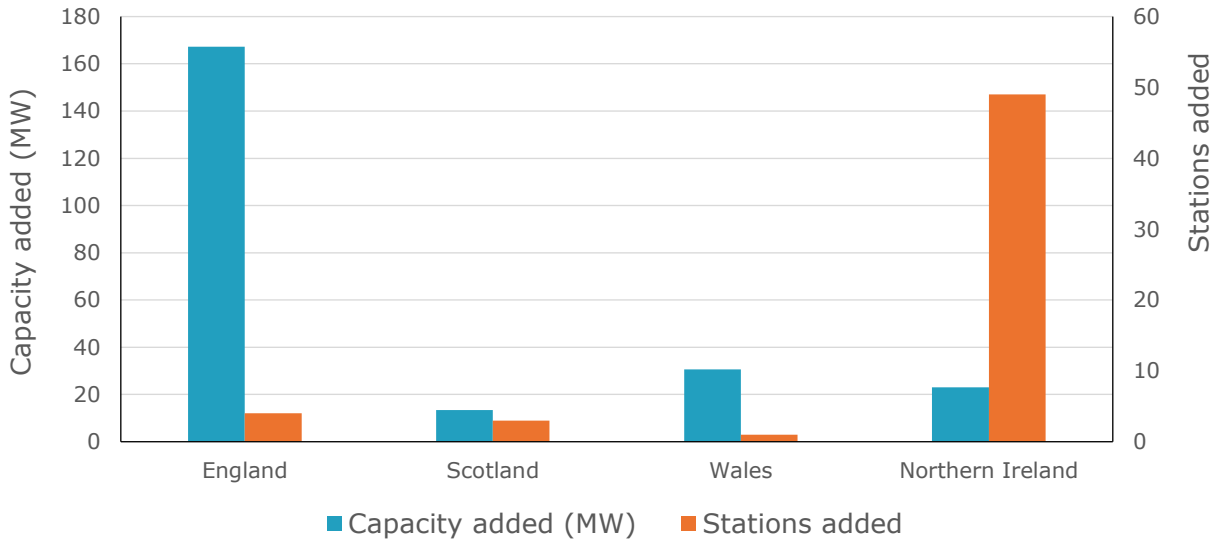
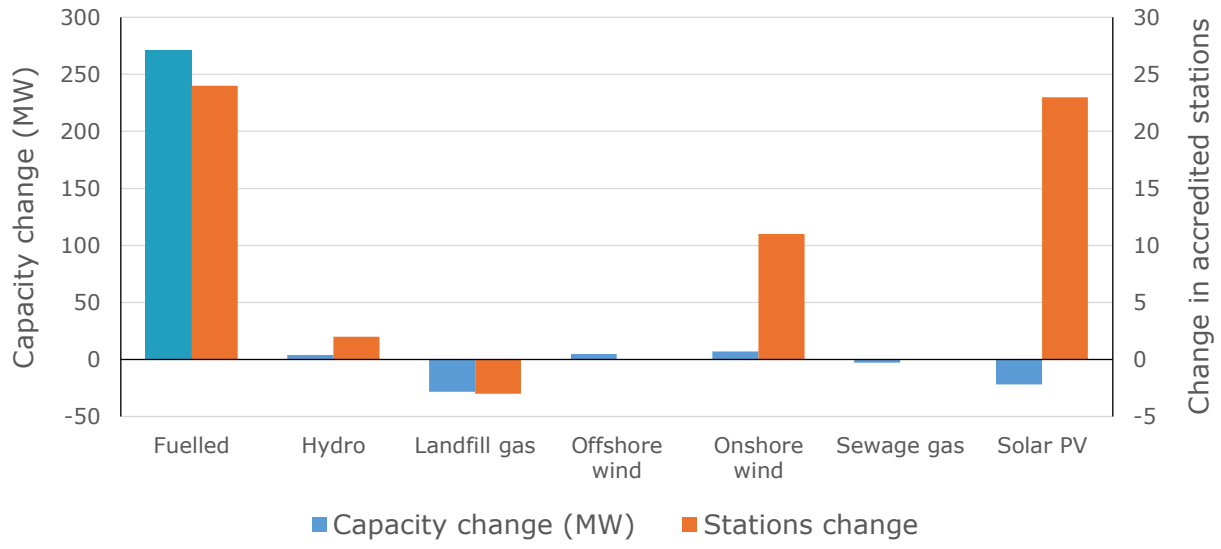


Figure 6.3: Accredited station and capacity change by technology (net change)



Application refusals

6.8 During an application assessment, if it is demonstrated that the applicant does not meet the eligibility criteria then we will look to refuse the application. A total of five applications were refused on this basis during 2019-20.

6.9 We also have cases where applicants do not provide sufficient evidence that they meet the scheme eligibility requirements. Where this occurs, we make a number of requests for the required evidence. If the applicant does not respond to our requests, the application is made dormant, and the application assessment is paused. However, should at a later date the applicant provide further evidence, the application assessment can continue.

6.10 Following publication of an open letter in October 2019,[80] we began issuing final requests for information in respect of dormant applications. Where applicants subsequently failed to respond, or provide the requested information by the specified deadline, their applications were cancelled. Using this new process, a total of 306 applications were cancelled and a further 46 were returned to assessment.

[80] Link to open letter on RO dormant applications: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-dormant-applications>

7. Changes in legislation

Chapter summary

Amendments came into force in December 2020, relating to the end of the transition period following the UK's exit from the EU. BEIS have also consulted on introducing legislation on changes to mutualisation arrangements.

End of Transition Period Regulations

7.1 The 'Guarantees of Origin of Electricity Produced from High-efficiency cogeneration and Renewables Obligation (Amendment) (EU Exit) Regulations 2020'[81], amend the UK-wide RO Orders to ensure that the scheme continues to operate in line with EU Regulations that will be retained in UK law. The changes came into force at the end of the transition period on 31 December 2020, following the UK's exit from the EU on 31 January 2020.

Changes to mutualisation arrangements

7.2 In December 2020, BEIS published a consultation[82] and call for evidence on introducing changes to mutualisation arrangements. The consultation proposed that the mutualisation threshold would move from its current fixed position of £15.4m to a variable sum, linked to the annual cost of the scheme to suppliers. BEIS concluded in February 2021 that the mutualisation threshold should be linked to the annual cost of the scheme and be re-calculated each year. Subject to Parliamentary approval of the amending legislation, the new arrangement will come into force on 31 March 2021, and take effect in the 2021 to 2022 obligation period.

[81] Link to 'Guarantees of Origin of Electricity Produced from High-efficiency cogeneration and Renewables Obligation (Amendment) (EU Exit) Regulations 2020' legislation:
<https://www.legislation.gov.uk/uksi/2020/849/contents/made>
[82] Link to consultation on changes to mutualisation arrangements:
<https://www.gov.uk/government/consultations/renewables-obligation-changes-to-mutualisation-arrangements>

8. Implementation and improvement update

Chapter summary

In 2019-20 we made changes to the Renewables and CHP Register (the Register) and our internal procedures to reflect changes to legislation - with relevant guidance documents being updated.

Register updates

8.1 During 2019-20, a limited number of changes were made to the Register. All amendments were undertaken so that we could continue to meet our legislative duties.

8.2 In relation to the exemption for Energy Intensive Industries (EIIs), changes were made to the compliance area of the Register in April 2019. These changes enable Suppliers to enter the information required for the calculation, ensuring more transparency and enabling the RO team to verify the figures entered and generated.

8.3 Other improvements made on the Register include changes in relation to Unsupported Capacity. This allows generators to record capacity not accredited under the RO within their application, and to submit output data for all generation whilst the system issues the correct number of ROCs.

8.4 We also increased the number of digits in unit conversion certificate codes, so that we are now able to issue more than 1 million of the same ROC type to a single generator in a single month.

8.5 A project is underway to replace the legacy Renewables and CHP Register. The Renewable Electricity Register (RER) is being designed to provide an improved user experience, be more intuitive and to include greater functionality for scheme participants and internal users. The RER was originally scheduled to go live in Q3 2020/21 but has been delayed due to several issues, including difficulties caused by Covid-19 home working restrictions. The RER is now planned to launch later in 2021

Consultation

8.6 In October 2020, we issued a public consultation[83] seeking views on proposed changes to the RO annual report. The consultation proposed several changes to the RO annual report with a view to making the report more concise and focused on key scheme activity, whilst also reducing the resource required for production. The conclusion to that consultation was published on 16 December 2020 and changes introduced in this annual report.

Guidance updates

8.7 We are currently reviewing our RO guidance documents to ensure that the guidance reflects the scheme closure and will sign post correctly to the new register.

8.8 Between April 2019 and November 2020 we published the following documents:

Renewables Obligation: Guidance for Generators (Published April 2019)

This guidance for generators was amended to provide an update on hydro generating stations in Scotland.

<https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-guidance-generators>

Renewables and CHP Register User Guide (Published April 2020)

This document was updated to include information on unsupported/excluded capacity.

<https://www.ofgem.gov.uk/publications-and-updates/renewables-and-chp-register-user-guide>

[83] Link to consultation on proposed changes to the RO annual report: <https://www.ofgem.gov.uk/publications-and-updates/consultation-seeking-views-proposed-changes-format-renewables-obligation-ro-annual-report>

Renewables Obligation: fuel measurement and sampling guidance (Published April 2020)

This document has been updated to include additional information on unsupported/excluded capacity.

<https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-fuel-measurement-and-sampling-guidance-0>

Audits of Renewables Obligation (RO) Generating Stations (Published May 2020)

This announced that from 2020/21, the RO/REGO Audit Team will commence a new annual audit programme, which will be carried out alongside the existing targeted audit programme.

<https://www.ofgem.gov.uk/publications-and-updates/audits-renewables-obligation-ro-generating-stations>

Renewables Obligation: Guidance for suppliers (Published July 2020)

This document provides guidance for all GB and NI licensed electricity suppliers under the Renewables Obligation. This document was updated to provide additional information and clarity surrounding the redistribution of the late payment and mutualisation funds and which suppliers are entitled to receive money from these. Guidance was also added on how we treat payments received from suppliers after the RO late payment deadline.

<https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-guidance-suppliers>

Guidance for generators: Co-location of electricity storage facilities with renewable generation supported under the Renewables Obligation or Feed-in Tariff schemes V3 (Published July 2020)

This guidance is for participants of the RO and FIT schemes on co-locating storage with their accredited RO generating station or FIT installation.

<https://www.ofgem.gov.uk/publications-and-updates/guidance-generators-co-location-electricity-storage-facilities-renewable-generation-supported-under-renewables-obligation-or-feed-tariff-schemes-0>

Renewables Obligation: Guidance for adding capacity following scheme closure (Published September 2020)

This document has been updated to provide further guidance around adding capacity after the closure of the scheme.

<https://www.ofgem.gov.uk/system/files/docs/2020/09/ro_generator_guidance_subsidiary_doc_0.pdf>

Banked ROCs FAQ (Published Nov 2020)

This document provides a brief overview of 2019/20 banked ROCs and the impact on applications, output data submissions and certificates transfer.

<https://www.ofgem.gov.uk/publications-and-updates/banked-rocs-faq>

Appendix 1: Determining fuelled station capacities

To determine the capacity of a fuelled station, we have to calculate the renewable proportion of the electricity generated by the station. For example, a generating station's capacity might be 2GW, but if it only burns 2% of eligible renewable fuels its renewable capacity is taken to be 40MW. There are more complicated cases, such as where a station burns different proportions of renewable fuel (the biomass fraction) from month to month, or where it did not claim any ROCs in 2018-19, so there is no biomass fraction to use. Where we have issued ROCs to them previously and they are still accredited under the scheme, our methodology for determining a station's capacity is as follows:

- If we issued ROCs to a station in 2019-20, we multiply its average biomass fraction for the year by its capacity. The biomass fraction may be 100%, for example in the case of dedicated biomass stations.
- If we did not issue ROCs to a station in 2019-20, but they are still accredited and have received ROCs previously, we use the station's biomass fraction from the most recent year it did receive ROCs and multiply this by its current capacity.

If we did not issue ROCs to a station in 2019-20, or at any time since April 2007 (the earliest date for which we have data on our Register), but it remains accredited, we use the average biomass fraction from 2019-20 for all active stations (95.65%) and multiply this by the station's capacity. For inactive co-firing stations with a capacity of 1GW or more, we use the average biomass fraction from 2019-20 (0.58%) for active co-firing stations of this size. This average does not take into account fractions for Drax power station (the largest generating station accredited under the RO), whose average biomass fractions are so high that they would skew the capacities of the inactive stations to an unrealistically high value.

Appendix 2: Compliance by licensed suppliers

Table A2.1: Summary of compliance by supplier group in 2019-20 (all jurisdictions)

Supplier Group	Total Obligation (ROCs)	Total ROCs presented	Total Payments	Total Redistributed
3T Power Limited	16,059	16,059	£0.00	£90,664
Alabama Energy Limited	8	0	£390.24	£0
Ampoweruk Limited	48,382	20,191	£1,383,505.11	£113,994
Avid Energy Limited	6,122	0	£298,631.16	£0
Avro Energy Limited	675,073	0	£32,930,060.94	£0
Axis Telecom Limited	3,713	0	£181,120.14	£0
AXPO UK Limited	361,264	361,264	£0.00	£2,039,650
BES Commercial Electricity Limited	206,561	0	£10,156,295.07	£0
Blue Green Energy	1,492	0	£72,779.76	£0
Breeze Energy Supply Limited	24,914	0	£0.00	£0
Bristol Energy Technology & Services (Supply) Limited	179,915	3,136	£8,694,368.52	£17,703
British Gas Trading Limited	13,574,303	13,522,551	£2,524,462.56	£76,346,692
British Gas X	65	0	£3,170.70	£0
Brook Green Trading Limited	347,049	228,007	£5,806,868.76	£1,287,296
Bruntwood Energy Services Limited	51,597	5,333	£2,256,757.92	£30,108
Bryt Energy Limited	592,116	592,116	£0.00	£3,343,014
Budget Energy Limited	49,490	49,490	£0.00	£279,413
Bulb Energy Ltd	3,128,155	231,888	£141,279,904.26	£1,309,208
Business Power and Gas Limited	178,498	5,667	£8,430,696.18	£31,993
Click Energy	20,904	20,904	£0.00	£118,019
CNG Electricity Limited	6,585	0	£321,216.30	£0
Co-Operative Energy Limited	184,259	74,379	£5,404,881.84	£419,931
Corona Energy Retail 4 Limited	212,556	212,556	£0.00	£1,200,062
Daisy Energy Supply Limited t/a Yorkshire Energy	68,754	0	£3,353,820.12	£0
Delta Gas and Power Ltd	7,056	0	£345,242.80	£0
Dual Energy Direct Limited	259,869	259,869	£0.00	£1,467,186
E (Gas and Electricity) Limited	268,300	268,300	£0.00	£1,514,787
E.ON UK Plc	12,724,717	12,724,717	£0.00	£71,842,216
Ecotricity	521,156	349,890	£8,354,355.48	£1,975,433
EDF Energy Customers Ltd	21,188,084	19,313,621	£91,436,305.14	£109,042,378
Effortless Energy Ltd	15,845	0	£0.00	£0
Electraphase Limited	47	0	£0.00	£0
Electric Ireland (ESBIE NI Ltd)	273,556	273,556	£0.00	£1,544,461
ElectroRoute Energy Limited	30,633	182	£1,485,399.78	£1,026
Eneco energy Trade BV	230,389	230,389	£0.00	£1,300,745
Energia Customer Solutions NI Limited	195,643	195,643	£0.00	£1,104,574
ENGIE Power Limited	3,647,060	3,570,508	£3,734,206.56	£20,158,656
Enstroga Ltd	52,414	11,993	£1,971,736.38	£67,708
EPG Energy Limited	20,708	3,194	£859,824.05	£18,031
ESB Energy Limited	127,979	127,979	£0.00	£722,551

Supplier Group	Total Obligation (ROCs)	Total ROCs presented	Total Payments	Total Redistributed
Euston Energy Limited	987	0	£48,545.30	£0
Eversmart Energy Limited	22,712	0	£0.00	£0
F & S Energy Limited	68,036	7,153	£2,969,872.74	£40,383
Fischer Energy	193,237	0	£9,445,416.18	£0
Flexitricity Limited	2,215	0	£108,047.70	£0
Flow Energy Limited	54,244	0	£2,668,205.41	£0
Gazprom Marketing & Trading Retail Limited	262,784	262,784	£0.00	£1,483,644
GnERGY Limited	13,233	0	£0.00	£0
Go Power (LCC Power Limited)	164,336	74,344	£4,389,809.76	£419,734
Good Energy Ltd	270,522	270,522	£0.00	£1,527,332
GoTo Energy (UK) Limited	6,581	6,546	£1,658.52	£36,954
Green Energy (UK) Plc	48,532	48,532	£0.00	£274,003
Green Energy Supply Limited	23,550	0	£1,148,769.00	£0
Green Network Energy Limited	566,514	0	£27,634,552.92	£0
Gulf (gas and Power) Ltd	23,413	0	£1,151,182.15	£0
Hartree Partners Supply (UK) Limited	541	267	£13,365.72	£1,504
Haven Power Limited	5,272,089	5,258,449	£0.00	£29,688,567
Home Energy Limited	63	0	£3,086.63	£0
Hudson Energy Supply UK Limited	871,857	871,857	£0.00	£4,922,397
I Suppy Energy	249,714	248,981	£35,755.74	£1,405,713
Igloo Energy Supply Limited	146,292	0	£7,136,123.76	£0
Limejump Energy Limited	7,151	7,151	£0.00	£40,372
Logicor Energy Limited	82	0	£3,999.96	£0
MA Energy Limited	44,797	0	£2,195,144.93	£0
Marble Power Limited	102,021	0	£4,976,584.38	£0
Maxen Power Supply Limited	6,508	0	£317,463.03	£0
Mississippi Energy Limited	5	0	£243.90	£0
MoneyPlus Energy	2,442	0	£119,120.76	£0
MVV Environment Services Limited	4,316	4,316	£0.00	£24,364
Nabuh Energy Ltd	55,015	0	£0.00	£0
Naturgy Limited	3,465	0	£169,022.70	£0
Neon Reef Ltd	105	0	£5,121.90	£0
Octopus Energy Limited	1,981,917	1,000,517	£47,872,692.00	£5,648,795
Omni Energy Ltd	0	0	£0.00	£0
Opus Energy Limited	2,064,336	2,064,336	£0.00	£11,654,987
Orbit Energy Limited	61,489	61,489	£0.00	£347,157
Orsted Power Sales (UK) Ltd	2,217,372	2,217,372	£0.00	£12,519,013
OVO Energy	3,480,550	3,480,550	£0.00	£19,650,763
People's Energy (Supply) Limited	135,621	135,500	£5,902.38	£765,015
PFP Energy Supplies Limited	107,628	61,500	£2,268,987.89	£347,220
Power NI (NIE Energy Ltd)	457,898	457,898	£0.00	£2,585,235
Power4All Limited	545,359	0	£26,602,612.02	£0
Pozitive Energy Ltd	487,949	487,949	£0.00	£2,754,899
Pure Planet Limited	273,726	146	£13,392,997.85	£821

Supplier Group	Total Obligation (ROCs)	Total ROCs presented	Total Payments	Total Redistributed
PX Supply Limited	35,749	0	£1,743,836.22	£0
Robin Hood Energy Limited	247,189	0	£0.00	£0
Rutherford Energy Supply Limited	6,546	0	£0.00	£0
RWE	16,470	3,000	£657,066.60	£16,935
RWE Npower Plc	14,513,790	14,477,804	£1,755,434.82	£81,739,926
ScottishPower Energy Retail Limited	8,510,860	8,510,860	£0.00	£48,051,287
Sembcorp Utilities (UK) Limited	9,667	9,667	£0.00	£54,575
Shell Energy Retail Limited	1,189,414	1,189,414	£0.00	£6,715,285
Shell Energy Supply UK Ltd	280,558	280,558	£0.00	£1,583,993
Simplicity Energy Limited	63,098	0	£3,077,922.64	£0
Simply Your Energy (Entice Energy)	1,939	0	£94,764.54	£0
SmartestEnergy Limited	3,583,088	3,583,088	£0.00	£20,229,680
Snowdrop Energy Supply Limited	3	0	£0.00	£0
SO Energy Trading Limited	336,300	336,300	£0.00	£1,898,706
Social Energy Supply Ltd	4,188	0	£204,290.64	£0
Solarplicity Supply Ltd	27,046	0	£0.00	£0
Squeaky Clean Energy Limited	146,229	137,992	£401,800.86	£779,083
SSE Airtricity Energy Supply Limited	279,812	279,812	£0.00	£1,579,782
SSE Energy Supply Limited	12,468,873	10,254,033	£108,039,895.20	£57,893,030
Statkraft Markets GmbH	1,558	0	£75,999.24	£0
Switch Business Gas and Power Ltd	2,583	0	£125,998.74	£0
Symbio Energy Limited	36,481	0	£1,279,543.18	£0
Together Energy Supply Limited	130,515	0	£6,419,895.83	£0
Tonik Energy Limited	180,620	3,256	£0.00	£18,381
Total Gas & Power Limited	5,074,978	5,074,978	£0.00	£28,652,713
TOTO Energy Limited	79,000	0	£0.00	£0
Toucan Energy Limited	1,487	0	£72,535.86	£0
Tradelink Solutions Ltd	277	277	£0.00	£1,561
Tru Energy Limited	12,964	0	£632,383.92	£0
UK Power Reserve Limited	2,928	0	£142,827.84	£0
United Gas & Power Ltd	58,647	0	£2,860,800.66	£0
Utilita Energy Limited	1,384,154	825,000	£27,325,460.65	£4,657,848
Utility Point	201,867	132,799	£3,369,137.04	£749,764
Utility Warehouse Limited	1,015,864	1,013,647	£108,145.26	£5,722,926
Valda Energy Limited	3,394	3,394	£0.00	£19,160
Vattenfall Energy Trading GmbH	18,030	18,030	£0.00	£101,792
Verastar Limited	107,344	38,081	£3,378,649.14	£214,998
Yorkshire Gas & Power	28,824	28,808	£0.00	£162,644
Yu Energy	290,831	40,000	£12,235,536.18	£225,832
Zebra Power Ltd	28,309	0	£1,380,913.02	£0
Totals	130,183,968	115,942,339	£661,353,123	£654,596,272

Table A2.2: Compliance by licensee[84] with an obligation in England & Wales

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
Alabama Energy Limited	8	0	0	0	£390.24	£0.00
Ampoweruk Limited	44,636	20,191	0	2,839	£0.00	£1,200,238.76
Opal Energy Limited	4,435	0	0	0	£216,339.30	£0.00
Avro Energy Limited	648,236	0	0	0	£31,620,952.08	£0.00
Axis Telecom Limited	3,585	0	0	0	£174,876.30	£0.00
AXPO UK Limited	335,812	335,812	722	73,297	£0.00	£0.00
BES Commercial Electricity Limited	187,422	0	0	0	£0.00	£9,215,259.10
Blue Green Energy	1,476	0	0	0	£71,999.28	£0.00
Breeze Energy Supply Limited	24,661	0	0	0	£0.00	£0.00
Bristol Energy	171,785	3,136	0	0	£0.00	£8,294,517.77
British Gas Trading Limited	12,498,180	12,450,558	196,948	29,328	£2,323,001.16	£0.00
Tillicum Energy Limited	58	0	0	0	£2,829.24	£0.00
Brook Green Trading Limited	322,778	228,007	0	0	£4,622,929.38	£0.00
Bruntwood Energy Services Limited	51,541	5,333	0	0	£2,254,026.24	£0.00
Bryt Energy Limited	557,174	557,174	0	0	£0.00	£0.00
Bulb Energy Ltd	2,795,580	231,888	0	3,713	£125,056,895.76	£0.00
Business Power and Gas Limited	165,761	5,667	0	5,667	£7,809,385.32	£0.00
CNG Electricity Limited	6,313	0	0	0	£307,948.14	£0.00
Co-Operative Energy Limited	175,400	74,379	0	72	£0.00	£4,969,116.93
Corona Energy Retail 4 Limited	189,769	189,769	0	0	£0.00	£0.00
Daisy Energy Supply Limited	65,691	0	0	0	£3,204,406.98	£0.00
Delta Gas and Power Limited	5,903	0	0	0	£117,948.34	£171,051.12
Dual Energy Direct Limited	231,939	231,939	0	0	£0.00	£0.00
E (Gas and Electricity) Limited	242,633	242,633	0	0	£0.00	£0.00
E.ON Energy Solutions Limited	6,968,275	6,968,275	0	5,080	£0.00	£0.00
E.ON UK Plc	5,105,796	5,105,796	0	0	£0.00	£0.00
Renewable Energy Company Limited	503,989	332,723	0	0	£8,354,355.48	£0.00
EDF Energy Customers Ltd	18,947,503	17,073,040	2,254	53,885	£91,436,305.14	£0.00
Effortless Energy Ltd	15,086	0	0	0	£0.00	£0.00
Electraphase Limited	41	0	0	0	£0.00	£0.00
Saphir Energy Limited	30,633	182	0	0	£1,485,399.78	£0.00
Eneco energy Trade BV	215,017	215,017	0	22,098	£0.00	£0.00
ENGIE Power Limited	3,402,888	3,326,336	0	169,400	£3,734,206.56	£0.00
Enstroga Ltd	47,364	11,993	0	0	£1,725,397.38	£0.00
EPG Energy Limited	20,262	3,194	0	3,194	£0.00	£837,928.34
ESB Energy Limited	121,378	121,378	0	30,344	£0.00	£0.00
Euston Energy Limited	987	0	0	0	£0.00	£48,545.30
Eversmart Energy Limited	21,563	0	0	0	£0.00	£0.00
F & S Energy Limited	64,814	7,153	0	2,299	£2,812,703.58	£0.00
Foxglove Energy Supply Limited	175,377	0	0	0	£5,128,777.90	£3,445,427.48

[84] The name of each Licensee in Tables A2.2 to A2.4 refers to a Licence group that is owned by its parent company (Supplier Group). For a complete list of supplier groups and their licences, please contact: REcompliance@ofgem.gov.uk

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
Flexitricity Limited	2,215	0	0	0	£108,047.70	£0.00
Flow Energy Limited	49,308	0	0	0	£0.00	£2,425,408.75
Gazprom Marketing & Trading Retail Limited	244,670	244,670	115	52,967	£0.00	£0.00
GnERGY Limited	12,976	0	0	0	£0.00	£0.00
Good Energy Limited	254,039	254,039	0	17,047	£0.00	£0.00
GoTo Energy (UK) Limited	5,681	5,647	0	0	£1,658.52	£0.00
Green Energy (UK) plc	46,618	46,618	0	796	£0.00	£0.00
Green Energy Supply Limited	22,703	0	0	0	£1,107,452.34	£0.00
Green Network Energy Limited	522,161	0	0	0	£25,471,013.58	£0.00
Rose Energy Supply Limited	21,349	0	0	0	£0.00	£1,049,698.36
Hartree Partners Supply (UK) Limited	541	267	0	0	£13,365.72	£0.00
Haven Power Limited	4,981,275	4,967,635	0	208	£0.00	£0.00
Spalt Energy Limited	61	0	0	0	£0.00	£2,988.31
Hudson Energy Supply UK Limited	810,770	810,770	50	0	£0.00	£0.00
I Supply Energy Limited	231,141	230,408	0	5,981	£35,755.74	£0.00
Igloo Energy Supply Limited	143,274	0	0	0	£6,988,905.72	£0.00
Limejump Energy Ltd	7,117	7,117	284	327	£0.00	£0.00
Marigold Energy Supply Limited	82	0	0	0	£3,999.96	£0.00
MA Energy Limited	39,254	0	0	0	£235,000.00	£1,689,757.39
Marble Power Limited	89,569	0	0	0	£4,369,175.82	£0.00
Hawking Energy Supply Limited	5,704	0	0	0	£258,241.12	£20,002.79
Mississippi Energy Limited	5	0	0	0	£243.90	£0.00
Oreba Energy Supply Limited	2,101	0	0	0	£102,486.78	£0.00
MVV Environment Services Limited	4,092	4,092	0	1,023	£0.00	£0.00
Nabuh Energy Ltd	48,547	0	0	0	£0.00	£0.00
Neon Reef Ltd	93	0	0	0	£4,536.54	£0.00
Affect Energy Limited	36,048	0	0	0	£1,758,421.44	£0.00
Octopus Energy Limited	1,808,703	1,000,517	0	2,221	£39,423,313.08	£0.00
Opus Energy (Corporate) Limited	919,931	919,931	0	0	£0.00	£0.00
Opus Energy Limited	992,062	992,062	0	14,154	£0.00	£0.00
Thistle Energy Supply Limited	57,093	57,093	0	0	£0.00	£0.00
Orsted Power Sales (UK) Ltd	2,031,407	2,031,407	94	88,416	£0.00	£0.00
OVO Electricity Limited	3,102,202	3,102,202	158	13,808	£0.00	£0.00
People's Energy (Supply) Limited	118,961	118,961	0	0	£0.00	£0.00
PFP Energy Supplies Limited	90,579	61,500	0	0	£0.00	£1,430,365.48
Power4All Limited	481,283	0	0	0	£23,476,984.74	£0.00
Pozitive Energy Ltd	469,086	469,086	0	0	£0.00	£0.00
Pure Planet Limited	244,859	146	0	146	£1,591,837.74	£10,393,027.85
Coulomb Energy Supply Limited	34,585	0	0	0	£1,687,056.30	£0.00
PX Supply Limited	1,164	0	0	0	£56,779.92	£0.00
Robin Hood Energy Limited	238,035	0	0	0	£0.00	£0.00
Rutherford Energy Supply Limited	5,984	0	0	0	£0.00	£0.00
Edgware Energy Limited	16,237	3,000	0	0	£645,700.86	£0.00
Npower Direct Limited	122,470	116,934	0	0	£0.00	£270,083.82
Npower Limited	10,510,664	10,486,663	16,154	1,996	£1,170,768.78	£0.00
Npower Northern Supply Ltd	2,533,879	2,528,093	0	0	£282,241.08	£0.00

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
NPower Yorkshire Supply Ltd	290,448	289,785	0	0	£32,341.14	£0.00
ScottishPower Energy Retail Limited	6,893,830	6,893,830	0	10,444	£0.00	£0.00
Wilton Energy Limited	9,667	9,667	0	0	£0.00	£0.00
Shell Energy Retail Limited	1,129,260	1,129,260	597	48,475	£0.00	£0.00
Shell Energy Supply UK Ltd	193,218	193,218	0	0	£0.00	£0.00
Simplicity Energy Limited	63,098	0	0	0	£3,062,188.55	£15,734.09
Supply Energy Limited	1,830	0	0	0	£34,975.26	£54,472.26
SmartestEnergy Limited	3,415,224	3,415,224	1,863	73,648	£0.00	£0.00
Snowdrop Energy Supply Limited	3	0	0	0	£0.00	£0.00
SO Energy Trading Limited	304,766	304,766	0	7,293	£0.00	£0.00
Dirac Energy Supply Limited	4,113	0	0	0	£200,632.14	£0.00
Solarplicity Supply Ltd	25,024	0	0	0	£0.00	£0.00
Squeaky Clean Energy Limited	130,523	130,523	0	0	£0.00	£0.00
SSE Energy Supply Limited	7,166,422	7,164,933	0	0	£72,633.42	£0.00
South Wales Electricity Ltd	3,524,467	1,311,116	0	0	£107,967,261.78	£0.00
Statkraft Markets GmbH	1,129	0	0	0	£55,072.62	£0.00
Switch Business Gas and Power Ltd	2,346	0	0	0	£114,437.88	£0.00
Symbio Energy	34,086	0	0	0	£462,715.08	£700,000.00
Eddington Energy Supply Limited	115,691	0	0	0	£0.00	£5,690,718.83
Tonik Energy Limited	169,327	3,256	0	3,256	£0.00	£0.00
Total Gas & Power Limited	4,768,927	4,768,927	0	708,509	£0.00	£0.00
TOTO Energy Limited	74,339	0	0	0	£0.00	£0.00
Mint	1,487	0	0	0	£72,535.86	£0.00
Tradelink Solutions Ltd	277	277	0	0	£0.00	£0.00
Tru Energy Limited	12,938	0	0	0	£631,115.64	£0.00
UK Power Reserve Limited	2,928	0	0	0	£142,827.84	£0.00
United Gas & Power Ltd	56,371	0	0	0	£2,749,777.38	£0.00
Utilita Energy Limited	1,239,003	679,849	0	0	£10,275,532.12	£17,049,928.53
Washington Energy Limited	186,666	132,799	0	0	£2,627,632.26	£0.00
Electricity Plus Supply Limited	970,846	968,629	842	0	£108,145.26	£0.00
Valda Energy Limited	2,919	2,919	0	0	£0.00	£0.00
Vattenfall Energy Trading GmbH	17,972	17,972	0	2,526	£0.00	£0.00
Sinq Power Limited	67,819	38,081	363	2,239	£1,450,619.64	£0.00
Eco Green Management Ltd	26,212	26,196	0	0	£0.00	£0.00
Kensington Power Limited	278,177	40,000	0	0	£11,618,274.06	£0.00
Zebra Power Ltd	26,826	0	0	0	£1,308,572.28	£0.00
Totals	116,940,506	103,721,658	220,444	1,456,696	£544,241,351.17	£68,974,271.26

Table A2.3: Compliance by licensee[85] with an obligation in Scotland

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
Ampoweruk Limited	3,746	0	0	0	£0.00	£183,266.42
Opal Energy Limited	1,687	0	0	0	£82,291.86	£0.00
Avro Energy Limited	26,837	0	0	0	£1,309,108.86	£0.00
Axis Telecom Limited	128	0	0	0	£6,243.84	£0.00
AXPO UK Limited	25,452	25,452	0	0	£0.00	£0.00
BES Commercial Electricity Limited	19,139	0	0	0	£0.00	£941,035.97
Blue Green Energy	16	0	0	0	£780.48	£0.00
Breeze Energy Supply Limited	253	0	0	0	£0.00	£0.00
Bristol Energy	8,130	0	0	0	£0.00	£399,850.75
British Gas Trading Limited	1,076,123	1,071,993	14,389	0	£201,461.40	£0.00
Tillicum Energy Limited	7	0	0	0	£341.46	£0.00
Brook Green Trading Limited	24,271	0	0	0	£1,183,939.38	£0.00
Bruntwood Energy Services Limited	56	0	0	0	£2,731.68	£0.00
Bryt Energy Limited	34,942	34,942	0	0	£0.00	£0.00
Bulb Energy Ltd	332,575	0	0	0	£16,223,008.50	£0.00
Business Power and Gas Limited	12,737	0	0	0	£621,310.86	£0.00
CNG Electricity Limited	272	0	0	0	£13,268.16	£0.00
Co-Operative Energy Limited	8,859	0	0	0	£0.00	£435,764.91
Corona Energy Retail 4 Limited	22,787	22,787	0	0	£0.00	£0.00
Daisy Energy Supply Limited	3,063	0	0	0	£149,413.14	£0.00
Delta Gas and Power Limited	1,153	0	0	0	£56,243.34	£0.00
Dual Energy Direct Limited	27,930	27,930	0	0	£0.00	£0.00
E (Gas and Electricity) Limited	25,667	25,667	0	0	£0.00	£0.00
E.ON Energy Solutions Limited	374,431	374,431	0	0	£0.00	£0.00
E.ON UK Plc	276,215	276,215	0	0	£0.00	£0.00
Renewable Energy Company Limited	17,167	17,167	0	0	£0.00	£0.00
EDF Energy Customers Ltd	2,240,581	2,240,581	875	248,129	£0.00	£0.00
Effortless Energy Ltd	759	0	0	0	£0.00	£0.00
Electraphase Limited	6	0	0	0	£0.00	£0.00
Eneco energy Trade BV	15,372	15,372	0	0	£0.00	£0.00
ENGIE Power Limited	244,172	244,172	0	18,064	£0.00	£0.00
Enstroga Ltd	5,050	0	0	0	£246,339.00	£0.00
EPG Energy Limited	446	0	0	0	£0.00	£21,895.71
ESB Energy Limited	6,601	6,601	0	1,514	£0.00	£0.00
Eversmart Energy Limited	1,149	0	0	0	£0.00	£0.00
F & S Energy Limited	3,222	0	0	0	£157,169.16	£0.00

[85] The name of each Licensee in Tables A2.2 to A2.4 refers to a Licence group that is owned by its parent company (Supplier Group). For a complete list of supplier groups and their licences, please contact: REcompliance@ofgem.gov.uk

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
Foxglove Energy Supply Limited	17,860	0	0	0	£871,210.80	£0.00
Flow Energy Limited	4,936	0	0	0	£0.00	£242,796.66
Gazprom Marketing & Trading Retail Limited	18,114	18,114	72	4,528	£0.00	£0.00
GnERGY Limited	257	0	0	0	£0.00	£0.00
Good Energy Limited	16,483	16,483	0	0	£0.00	£0.00
GoTo Energy (UK) Limited	900	899	0	0	£0.00	£0.00
Green Energy (UK) Plc	1,914	1,914	0	0	£0.00	£0.00
Green Energy Supply Limited	847	0	0	0	£41,316.66	£0.00
Green Network Energy Limited	44,353	0	0	0	£2,163,539.34	£0.00
Rose Energy Supply Limited	2,064	0	0	0	£0.00	£101,483.79
Haven Power Limited	290,814	290,814	0	0	£0.00	£0.00
Spalt Energy Limited	2	0	0	0	£0.00	£98.32
Hudson Energy Supply UK Limited	61,087	61,087	0	0	£0.00	£0.00
I Supply Energy Limited	18,573	18,573	0	0	£0.00	£0.00
Igloo Energy Supply Limited	3,018	0	0	0	£147,218.04	£0.00
Limejump Energy Ltd	34	34	1	1	£0.00	£0.00
MA Energy Limited	5,543	0	0	0	£270,387.54	£0.00
Marble Power Limited	12,452	0	0	0	£607,408.56	£0.00
Hawking Energy Supply Limited	804	0	0	0	£39,219.12	£0.00
Oreba Energy Supply Limited	341	0	0	0	£16,633.98	£0.00
MVV Environment Services Limited	224	224	0	56	£0.00	£0.00
Nabuh Energy Ltd	6,468	0	0	0	£0.00	£0.00
Neon Reef Ltd	12	0	0	0	£585.36	£0.00
Affect Energy Limited	128	0	0	0	£6,243.84	£0.00
Octopus Energy Limited	137,038	0	0	0	£6,684,713.64	£0.00
Opus Energy (Corporate) Limited	65,890	65,890	0	0	£0.00	£0.00
Opus Energy Limited	86,453	86,453	0	0	£0.00	£0.00
Thistle Energy Supply Limited	4,396	4,396	0	0	£0.00	£0.00
Orsted Power Sales (UK) Ltd	185,965	185,965	30	0	£0.00	£0.00
OVO Electricity Limited	378,348	378,348	0	62,471	£0.00	£0.00
People's Energy (Supply) Limited	16,660	16,539	0	0	£5,902.38	£0.00
PFP Energy Supplies Limited	17,049	0	0	0	£0.00	£838,622.41
Power4All Limited	64,076	0	0	0	£3,125,627.28	£0.00
Pozitive Energy Ltd	18,863	18,863	0	0	£0.00	£0.00
Pure Planet Limited	28,867	0	0	0	£1,408,132.26	£0.00
Robin Hood Energy Limited	9,154	0	0	0	£0.00	£0.00
Rutherford Energy Supply Limited	562	0	0	0	£0.00	£0.00
Edgware Energy Limited	233	0	0	0	£11,365.74	£0.00
Npower Direct Limited	8,066	8,066	0	0	£0.00	£0.00
Npower Limited	917,528	917,528	0	0	£0.00	£0.00
Npower Northern Supply Ltd	130,680	130,680	0	0	£0.00	£0.00
NPower Yorkshire Supply Ltd	55	55	0	0	£0.00	£0.00

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
ScottishPower Energy Retail Limited	1,617,030	1,617,030	0	0	£0.00	£0.00
Shell Energy Retail Limited	60,154	60,154	0	0	£0.00	£0.00
Shell Energy Supply UK Ltd	87,340	87,340	0	0	£0.00	£0.00
Supply Energy Limited	109	0	0	0	£5,317.02	£0.00
SmartestEnergy Limited	167,864	167,864	1	27,780	£0.00	£0.00
SO Energy Trading Limited	31,534	31,534	0	1,402	£0.00	£0.00
Dirac Energy Supply Limited	75	0	0	0	£3,658.50	£0.00
Solarplicity Supply Ltd	2,022	0	0	0	£0.00	£0.00
Squeaky Clean Energy Limited	15,706	7,469	0	9	£401,800.86	£0.00
SSE Energy Supply Limited	951,650	951,650	0	68,289	£0.00	£0.00
South Wales Electricity Ltd	826,334	826,334	0	0	£0.00	£0.00
Statkraft Markets GmbH	429	0	0	0	£20,926.62	£0.00
Switch Business Gas and Power Ltd	237	0	0	0	£11,560.86	£0.00
Symbio Energy	2,395	0	0	0	£116,828.10	£0.00
Eddington Energy Supply Limited	14,824	0	0	0	£0.00	£729,177.00
Tonik Energy Limited	11,293	0	0	0	£0.00	£0.00
Total Gas & Power Limited	306,051	306,051	0	76,512	£0.00	£0.00
TOTO Energy Limited	4,661	0	0	0	£0.00	£0.00
Tru Energy Limited	26	0	0	0	£1,268.28	£0.00
United Gas & Power Ltd	2,276	0	0	0	£111,023.28	£0.00
Utilita Energy Limited	145,151	145,151	0	0	£0.00	£0.00
Washington Energy Limited	15,201	0	0	0	£741,504.78	£0.00
Electricity Plus Supply Limited	45,018	45,018	0	0	£0.00	£0.00
Valda Energy Limited	475	475	0	0	£0.00	£0.00
Vattenfall Energy Trading GmbH	58	58	0	0	£0.00	£0.00
Sinq Power Limited	39,525	0	0	0	£1,928,029.50	£0.00
Eco Green Management Ltd	2,612	2,612	0	0	£0.00	£0.00
Kensington Power Limited	12,654	0	0	0	£617,262.12	£0.00
Zebra Power Ltd	1,483	0	0	0	£72,340.74	£0.00
Totals	11,782,299	10,852,975	15,368	508,755	£39,684,676.32	£3,893,991.94

Table A2.4: Compliance by licensee[86] with the RO (Northern Ireland)

Licence	RO Obligation (ROCs)	Total ROCs presented	Bioliquid ROCs presented	Banked ROCs presented	Buy-out Payment Made by Licensee	Late Payment Made by Licensee
3T Power Limited	16,059	16,059	0	0	£0.00	£0.00
Budget Energy Ltd	49,490	49,490	0	756	£0.00	£0.00
Click Energy	20,904	20,904	0	0	£0.00	£0.00
Electric Ireland	273,556	273,556	0	0	£0.00	£0.00
Energia	195,643	195,643	0	2,166	£0.00	£0.00
Go Power	164,336	74,344	0	142	£4,389,809.76	£0.00
Naturgy Limited	3,465	0	0	0	£169,022.70	£0.00
Power NI Energy Limited	457,898	457,898	0	87,325	£0.00	£0.00
SSE Airtricity Energy Supply Ltd	279,812	279,812	0	0	£0.00	£0.00
Totals	1,461,163	1,367,706	0	90,389	£4,558,832.46	£0.00

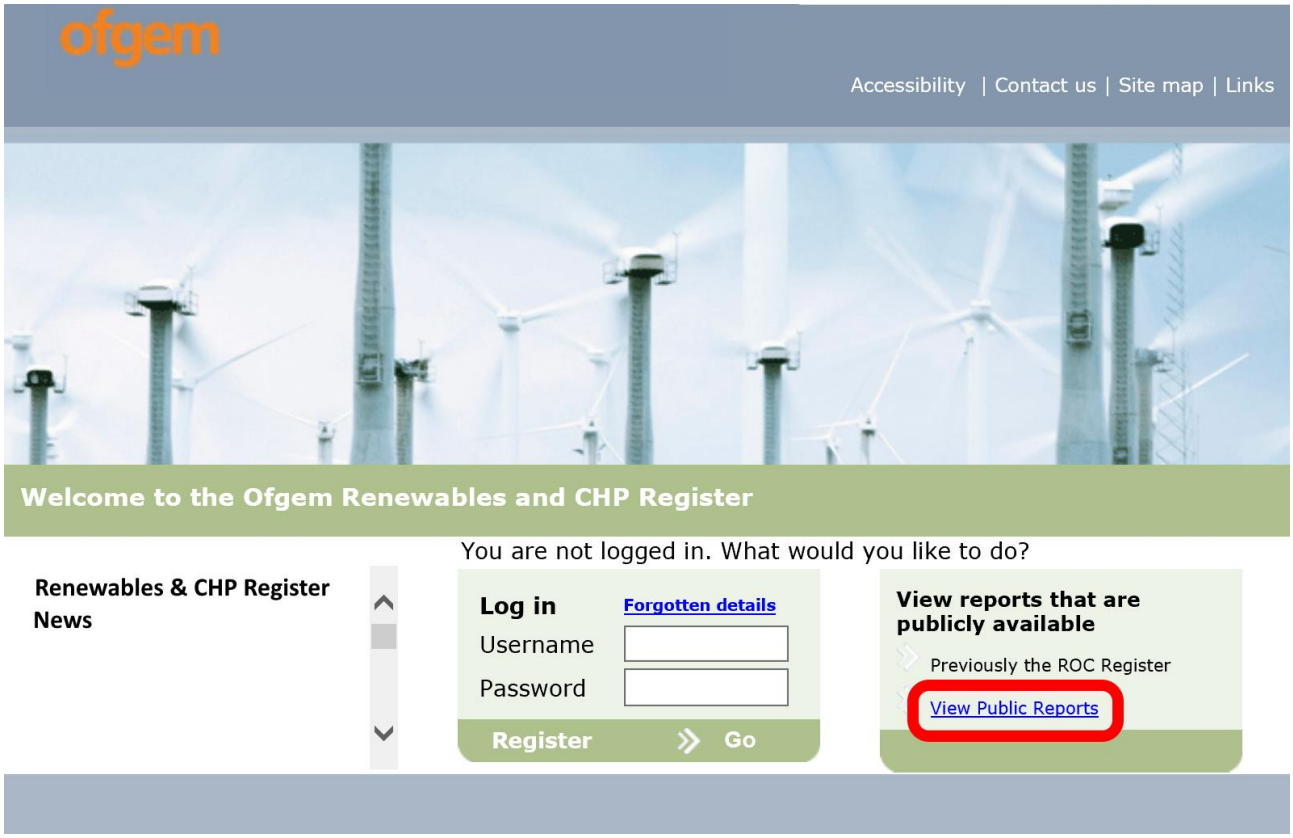
[86] The name of each Licensee in Tables A2.2 to A2.4 refers to a Licence group that is owned by its parent company (Supplier Group). For a complete list of supplier groups and their licences, please contact: REcompliance@ofgem.gov.uk

Appendix 3: Using the public reports

A number of reports on the Renewables Obligation scheme are publicly available via the Renewables and CHP Register. To assist readers who may wish to analyse the data upon which chapters 2 and 6 is largely based, this section gives further information on the two reports used – the 'Accredited Stations' and 'Certificates' reports. Please note that there are a number of other reports available, but these are not used in the production of the RO annual report and so are not covered.

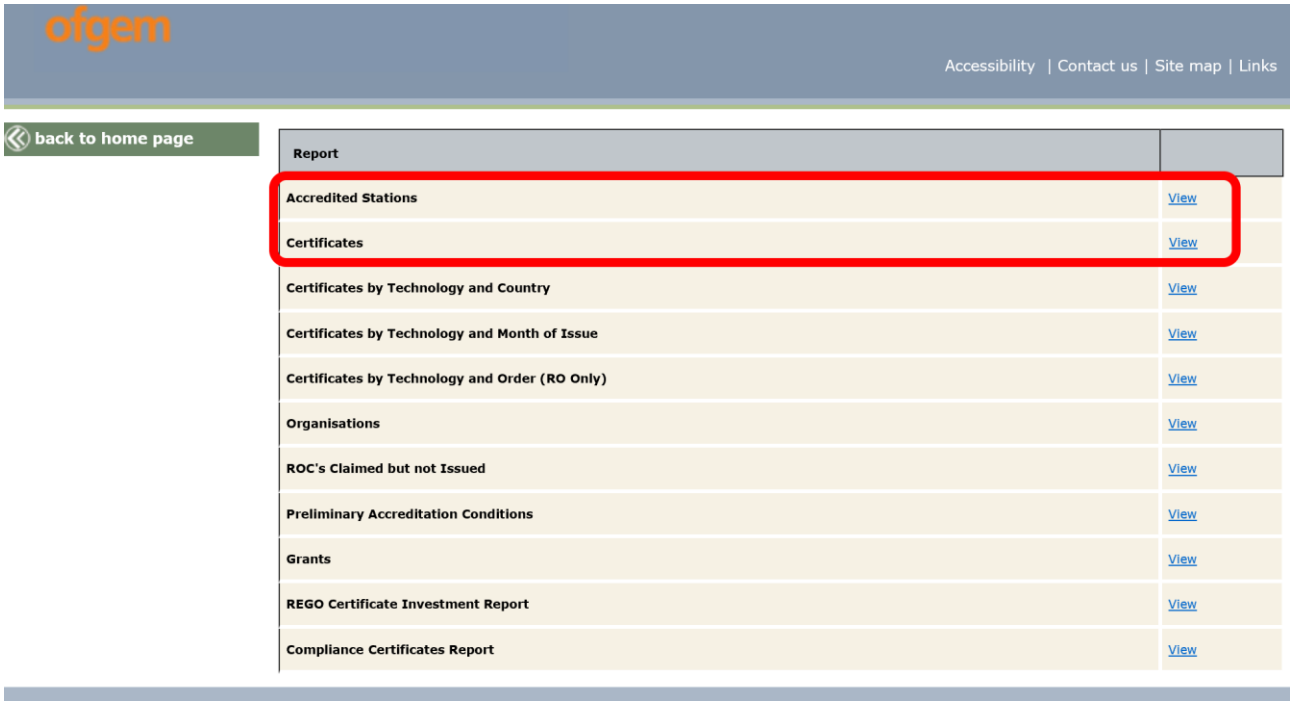
The public reports can be accessed via the Renewables and CHP login page (https://www.renewablesandchp.ofgem.gov.uk/) which is shown in **Figure A3.1**. The link to view the public reports is highlighted.

Figure A3.1: The Renewables and CHP login page



Clicking the 'View Public Reports' link takes you to the Public Reports homepage as shown in **Figure A3.2**. The links to the 'Accredited Stations' and 'Certificates' reports are highlighted.

Figure A3.2: The Public Reports homepage



Accredited Stations report

The accredited stations report provides data on the stations which have been granted accreditation on the Renewables Obligation scheme. The table below gives information on the fields available in the report.

Table A3.1: Accredited stations report - field descriptions

Field name	Description
Accreditation Number	The unique accreditation number given to a generating station
Status	Denoted either 'Live' or 'Preliminary' accreditation. Only stations that are live or have been granted full accreditation are included in the annual report
Generating Station	The unique name of the generating station
Scheme	The name of the support scheme. For the data in this report this is the Renewables Obligation (RO)
Station DNC	The Declared Net Capacity of the generating station
Country	The country where the generating station is located
Technology	The renewable technology installed. Please note that for the purposes of the annual report the technology types have been simplified to: • Fuelled • Hydro • Landfill gas

	• Offshore wind • Onshore wind • Sewage gas • Solar PV • Wave Power • Tidal stream
Contract Type	Where shown as 'NFPA' this field identifies stations with both NFFO and RO accreditation. The 'General' label identifies all other stations on the RO scheme.
Accreditation Date	The date from which the station is eligible to receive support under the RO scheme
Commission Date	The date on which the station commissioned
Organisation	The name of the organisation as recorded on the Renewables and CHP Register
Organisation Contact Address	The organisation's contact address
Organisation Contact Fax	The organisation's fax number
Generating Station Address	The generating station's address

Certificates report

The certificates report provides data on the ROCs which have been generated by the Renewables and CHP Register. The table below gives information on the fields available in the report.

Table A3.1: Certificates report - field descriptions

Field name	Description
Accreditation No.	The unique accreditation number given to a generating station
Generating Station / Agent Group	The unique name of the generating station
Station TIC	The Total Installed Capacity of the generating station
Scheme	The name of the support scheme. For the data in this report this is the Renewables Obligation (RO)
Country	The country where the generating station is located
Technology Group	The renewable technology installed. Please note that for the purposes of the annual report the technology types have been simplified to: • Fuelled • Hydro • Landfill gas • Offshore wind • Onshore wind • Sewage gas • Solar PV • Wave Power • Tidal stream

Generation Type	Where the technology type is 'Fuelled' or 'Biomass 50kW DNC or less' this field gives further information about the renewable technology used
Output Period	The month and year when the generation took place
No. Of Certificates	The number of certificates generated in relation to the renewable generation
Start Certificate No.	The start certificate reference number for the certificates generated
End Certificate No.	The end certificate reference number for the certificates generated
MWh Per Certificate	The number of MWh of generation the station needs to generate in order to earn one ROC
Issue Date	The date on which the ROCs were generated by the Renewables & CHP Register
Certificate Status	Identifies the current status of the certificates. This can be either: • Issued • Revoked • Retired • Redeemed • Expired
Status Date	The date of the most recent certificate status change. This will usually be the date when the ROCs changed to the status shown in the previous field.
Current Holder Organisation Name	The name of the organisation currently holding the ROCs
Company Registration Number	The company registration number of the current holder organisation

Appendix 4: Glossary of terms

A

AD - Anaerobic digestion

Authority - Gas and Electricity Markets Authority

B

BEIS - Department for Business, Energy and Industrial Strategy

C

CHP - Combined Heat and Power

CfD - Contracts for Difference

D

Digestate – Material remaining after anaerobic digestion process

DNC - Declared Net Capacity

E

EII – Energy Intensive Industries

EU – European Union

F

FIT - Feed-in-Tariffs

G

GB - Great Britain

GHG - Greenhouse Gas

GW - Gigawatt

K

kW – Kilowatt

M

MW - Megawatt

MWh - Megawatt hour

N

NFFO - Non-Fossil Fuel Obligation

NFPA - Non-Fossil Fuel Purchasing Agency

NI - Northern Ireland

NIAUR - Northern Ireland Authority for Utility Regulation

NIE - Northern Ireland Electricity Networks

NIRO - Northern Ireland Renewables Obligation

NIROC - Northern Ireland Renewables Obligation Certificate

O

Ofgem - Office of Gas and Electricity Markets

OG – Off Grid

P

PV – Photovoltaic

R

R&CHP Register - Renewables and CHP Register

Register - Renewables and CHP Register

RO - Renewables Obligation

ROC - Renewables Obligation Certificate

ROI – Republic of Ireland

ROO - Renewables Obligation Order

ROS - Renewables Obligation Scotland

RPI - Retail Price Index

S

SRO - Scottish Renewables Obligation

SROC - Scottish Renewables Obligation Certificates

T

TIC - Total Installed Capacity

TWh - Terawatt hour

U

UK - United Kingdom

Z

ZE – Zero Export