Our Carbon Footprint in the UK

2014 - 2017



	Unit	2014	2015	2016	2017
Location-based Carbon Footprint (Scope 1 and 2) ¹	tonnes CO ₂ e	237,068	209,043	214,351	216,801
Market-based Carbon Footprint (Scope 1 and 2) ¹	tonnes CO ₂ e	303,054	252,640	258,072	172,526

Gross Carbon Footprint Overview

	Unit	2014	2015	2016	2017
Location-based Carbon Footprint (Scope 1 and 2)		237,068	209,043	214,351	216,801
Location-based CO ₂ e/Revenue Generating Unit	kg CO ₂ e	18.94	16.42	16.44	16.21
Location-based CO ₂ e/£m Revenue	tonnes CO ₂ e	56.26	47.95	47.83	47.15
Location-based CO ₂ e/Employee (Headcount, Year end)	tonnes CO ₂ e	17.77	15.54	16.01	16.80
Location-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.05	0.03	0.03	0.02

	Unit	2014	2015	2016	2017
Location-based Carbon Footprint (Scope 1, 2 and 3)	tonnes CO ₂ e	690,021	595,533	604,410	610,817
Location-based CO ₂ e/Revenue Generating Unit	kgCO ₂ e	55.14	46.77	46.37	45.68
Location-based CO ₂ e/£m Revenue	tonnes CO ₂ e	163.75	136.60	134.87	132.83
Location-based CO ₂ e/Employee (Headcount, Year end)	tonnes CO ₂ e	51.73	44.27	45.14	47.33
Location-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.16	0.09	0.08	0.05

Breakdown

Breakdown					
	Unit	2014	2015	2016	2017
Scope 1 Emissions (Direct)	tonnes CO ₂ e	23,892	25,782	28,610	32,717
Static Combustion (diesel, gas and gas oil)	tonnes CO ₂ e	3,165	2,987	2,844	3,159
Company Vehicles ³	tonnes CO ₂ e	13,601	11,430	12,135	12,786
Fugitive Emissions	tonnes CO ₂ e	7,127	11,365	13,630	16,772
Scope 2 Location-based Emissions (Indirect)	tonnes CO ₂ e	213,176	183,261	185,741	184,084
Electricity	tonnes CO ₂ e	213,176	183,261	185,741	184,084
Scope 2 Market-based Emissions (Indirect)		279,162	226,858	229,462	139,809
Electricity	tonnes CO ₂ e	279,162	226,858	229,462	139,809
Scope 3 Emissions (Other Indirect)	tonnes CO ₂ e	452,953	386,490	390,059	394,016
Customer Premise Equipment ¹	tonnes CO ₂ e	427,910	365,253	364,464	362,676
Normalised Customer Premise Equipment	kgCO ₂ e/cpe	44.0	37.2	36.6	35.7
Modems	tonnes CO ₂ e	152,655	137,960	146,117	153,516
Emissions per Modem	kgCO ₂ e/modem unit	34.3	30.0	30.4	30.6
Set-top-boxes	tonnes CO ₂ e	275,255	227,292	218,347	209,160
Emission per Box	kgCO ₂ e/set-top-box unit	52.2	43.4	42.4	40.6
Air Travel ⁴	tonnes CO ₂ e	1,457	2,899	2,300	1,985
Normalised Air Travel	kgCO ₂ e/employee (headcount, year end)	109	216	172	154
Land Travel ⁵	tonnes CO2e	8,112	3,874	5,890	6,130
Normalised Land Travel	kgCO ₂ e/employee (headcount, year end)	608	288	440	475
Third Party Service and Install ⁶	tonnes CO ₂ e	15,116	14,192	17,113	22,894
Recycling of Customer Premise Equipment	tonnes CO ₂ e	30	16	12	35
Waste	tonnes CO ₂ e	282	212	238	253
Water	tonnes CO ₂ e	46	44	42	43
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Our Carbon Footprint in the UK

2014 - 2017



Market-based Carbon Footprint Overview

	Unit	2014	2015	2016	2017
Market-based Carbon Footprint (Scope 1 and 2)	tonnes CO ₂ e	303,054	252,640	258,072	172,526
Market-based CO ₂ e/Revenue Generating Unit	kgCO ₂ e	24.22	19.84	19.80	12.90
Market-based CO ₂ e/£m Revenue	tonnes CO ₂ e	71.92	57.95	57.59	37.52
Market-based CO ₂ e/Employee (Head Count, Year end)	tonnes CO ₂ e	22.72	18.78	19.27	13.37
Market-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.07	0.04	0.03	0.01

	Unit	2014	2015	2016	2017
Market-based Carbon Footprint (Scope 1, 2 and 3)	tonnes CO ₂ e	756,007	639,130	648,131	566,542
Market-based CO ₂ e/Revenue Generating Unit	kgCO ₂ e	60.42	50.20	49.72	42.37
Market-based CO ₂ e/£m Revenue	tonnes CO ₂ e	179.41	146.60	144.62	123.20
Market-based CO ₂ e/Employee (Headcount, Year end)	tonnes CO ₂ e	56.67	47.51	48.40	43.90
Market-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.17	0.10	0.08	0.04

Other

	Unit	2014	2015	2016	2017
Water	m ³	147,304	133,674	127,168	125,885

Business-adjusted KPIs

	Unit	2014	2015	2016	2017
Business Information	Revenue Generating Unit	12,513,500	12,732,400	13,035,900	13,371,600
	Revenue (£m)	4213.9	4359.6	4481.5	4598.5
	Employees (Headcount, Year end)	13,340	13,452	13,391	12,905

¹ All emissions factors (dating from 2014 - 2017), except for electricity emission factors, have been updated in line with the DEFRA 2017 emissions factors. As such, previously reported figures have moved slightly in some instances.

We have adopted best practice for electricity emission factors by locking in the factors for the generating year where it is known.

- This results in the following:
- 2014 Defra 2016 factors for 2014 generating year (locked in)
- 2015 Defra 2017 factors for 2015 generating year (locked in) • 2016 – Defra 2017 factors for 2015 generating year (will be locked in next year
- using Defra 2018 factors for 2016 generating year) • 2017 – Defra 2017 factors for 2015 generating year (will be locked in in two year's time using Defra 2019 factors for 2017 generating year)

These changes affect Scope 2 electricity emissions and Scope 3 Customer Premise Equipment emissions

² This intensity metric has been aligned with Liberty Global and therefore report our electricity consumption and also our net emissions per terabyte of data consumed. The figures for 'terabytes (TB) of data usage' are based on

estimated internet protocol (IP) based traffic. We plan to collect the actual data going forward. TB of data usage excludes services not offered over IPbased technology and therefore excludes data usage in connection with cable television, digital television, video-on-demand, asymmetric digital subscriber line and time-division multiplexing licensed capacity. Over time, we expect that all of our data usage will migrate to IP-based technology.

- ³ Company vehicles includes company owned and leased cars and vans only. Fuel used in private vehicles that is covered by fuel card, cash allowance or reimbursed by the company are included in Scope 3 emissions.
- ⁴Data only accounts for flights booked through our booking portal, approx 90%.
- ⁵ Business land travel includes travel in rental cars, taxis, rail and public transportation. In addition, business land travel also includes travel in employee owned or leased vehicles for business purposes. Rail purchased outside of our central booking system and claimed back through expenses is also included
- ⁶ Data was estimated for one contractor in 2016. For the first time third party vehicle impacts now includes fuel used for our

network expansion programme which explains the increase in third party fuel consumed between 2016 and 2017 Data was estimated for five our of 27 contractors in 2017.

n/a: We do not have good enough data available

All data in this document covers the period January 1 to December 31 unless otherwise stated.

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For more information on our environmental reporting criteria, please visit www.libertyglobal.com/cr/PDF/2017-Environmental-Reporting-Criteria-25-April-2018.pdf.

* 2014 is the baseline year for the 2020 goals.

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Our Carbon Footprint in Ireland

2014 - 2017



	Unit	2014	2015	2016	2017
Location-based Carbon Footprint (Scope 1 and 2) ¹	tonnes CO ₂ e	11,500	11,611	11,671	12,936
Market-based Carbon Footprint (Scope 1 and 2) ¹	tonnes CO ₂ e	8,434	1,490	2,026	1,568

Gross Carbon Footprint Overview

	Unit	2014	2015	2016	2017
Location-based Carbon Footprint (Scope 1 and 2)		11,500	11,611	11,671	12,936
Location-based CO ₂ e/Revenue Generating Unit	kg CO ₂ e	10.35	10.61	11.43	12.67
Location-based CO ₂ e/£m Revenue	tonnes CO ₂ e	7.12	44.86	35.96	35.47
Location-based CO ₂ e/Employee (Headcount, Year end)	tonnes CO ₂ e	13.69	17.20	12.38	17.82
Location-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.03	0.03	0.02	0.01

	Unit	2014	2015	2016	2017
Location-based Carbon Footprint (Scope 1, 2 and 3)	tonnes CO ₂ e	13,746	15,384	15,536	16,093
Location-based CO ₂ e/Revenue Generating Unit	kgCO ₂ e	12.37	14.05	15.22	15.76
Location-based CO ₂ e/£m Revenue	tonnes CO ₂ e	n/a	59.44	47.86	44.13
Location-based CO ₂ e/Employee (Headcount, Year end)	tonnes CO ₂ e	16.36	22.79	16.48	22.17
Location-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.04	0.04	0.02	0.02

Breakdown

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	Unit	2014	2015	2016	2017		
Scope 1 Emissions (Direct)	tonnes CO ₂ e	1,521	1,490	1,150	1,568		
Static Combustion (diesel, gas and gas oil)	tonnes CO ₂ e	45	46	168	155		
Company Vehicles ³	tonnes CO ₂ e	1,318	1,168	860	965		
Fugitive Emissions	tonnes CO ₂ e	159	276	122	449		
Scope 2 Location-based Emissions (Indirect)	tonnes CO ₂ e	9,979	10,121	10,521	11,368		
Electricity	tonnes CO ₂ e	9,979	10,121	10,521	11,368		
Scope 2 Market-based Emissions (Indirect)		6,913	0	876	0		
Electricity	tonnes CO ₂ e	6,913	0	876	0		
Scope 3 Emissions (Other Indirect)	tonnes CO ₂ e	2,246	3,773	3,865	3,157		
Customer Premise Equipment ⁴	tonnes CO ₂ e	-	-	-	-		
Normalised Customer Premise Equipment	kgCO ₂ e/cpe	-	-	-	-		
Modems ⁴	tonnes CO ₂ e	-	-	-	-		
Emissions per Modem	kgCO ₂ e/modem unit	_	-	-	-		
Set-top-boxes ⁴	tonnes CO ₂ e	-	-	-	-		
Emission per Box	kgCO ₂ e/set-top-box unit	-	-	-	-		
Air Travel ⁵	tonnes CO ₂ e	250	372	44	59		
Normalised Air Travel	kgCO ₂ e/employee (headcount, year end)	298	551	47	81		
Land Travel ⁶	tonnes CO2e	509	617	612	267		
Normalised Land Travel	kgCO ₂ e/employee (headcount, year end)	606	914	649	368		
Third Party Service and Install	tonnes CO ₂ e	1,444	2,776	3,174	2,771		
Recycling of Customer Premise Equipment	tonnes CO ₂ e	1	3	1	1		
Waste	tonnes CO ₂ e	39	2	31	56		
Water	tonnes CO ₂ e	3	3	3	3		

Our Carbon Footprint in Ireland

2014 - 2017



Market-based Carbon Footprint Overview

	Unit	2014	2015	2016	2017
Market-based Carbon Footprint (Scope 1 and 2)	tonnes CO ₂ e	8,434	1,490	2,026	1,568
Market-based CO ₂ e/Revenue Generating Unit	kgCO ₂ e	7.59	1.36	1.98	1.54
Market-based CO ₂ e/£m Revenue	tonnes CO ₂ e	n/a	5.76	6.24	4.30
Market-based CO ₂ e/Employee (Head Count, Year end)	tonnes CO ₂ e	10.04	2.21	2.15	2.16
Market-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.02	0.00	0.00	0.00

	Unit	2014	2015	2016	2017
Market-based Carbon Footprint (Scope 1, 2 and 3)	tonnes CO ₂ e	10,680	5,263	5,891	4,725
Market-based CO ₂ e/Revenue Generating Unit	kgCO ₂ e	9.61	4.81	5.77	4.63
Market-based CO ₂ e/£m Revenue	tonnes CO ₂ e	n/a	20.34	18.15	12.96
Market-based CO ₂ e/Employee (Headcount, Year end)	tonnes CO ₂ e	12.71	7.80	6.25	6.51
Market-based CO ₂ e/TB Data ²	tonnes CO ₂ e	0.03	0.01	0.01	0.00

Other

	Unit	2014	2015	2016	2017
Water	m ³	9,509	8,031	9,046	7,760

Business-adjusted KPIs

	Unit	2014	2015	2016	2017
Business Information	Revenue Generating Unit	1,111,200	1,094,800	1,020,700	1,021,200
	Revenue (£m)	283	258.8	324.6	364.7
	Employees (Headcount, Year end)	840	675	943	726

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• 2014 - Defra 2016 factors for 2014 generating year (locked in)

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- ⁴CPE data not currently available in Ireland
- ⁵ Data only accounts for flights booked through our booking portal, approx 90%.
- ⁶ Business land travel includes travel in rental cars, taxis, rail and public transportation. In addition, business land travel also includes travel in employee owned or leased vehicles for business purposes. Rail purchased outside of our central booking system and claimed back through expenses is also included

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