

Brighton & Hove City Council – Carbon Emissions Report 2018/19

August 2019

1.0 Introduction

At the end of July each year the council has a duty to submit a Carbon Footprint Report for qualifying emissions (Carbon Reduction Commitment) to the Environment Agency (EA). We also publish a total Greenhouse Gas Footprint Report (GHG) to the council website.

The footprints differ in that the GHG report includes emissions for all greenhouse gas emissions converted to carbon dioxide equivalents (CO₂e). The GHG Footprint Report includes a full picture of our organisational emissions including electricity, gas and oil use in corporate buildings, schools and housing(communal supplies); as well as emissions from street lighting electricity and council fleet fuel usage.

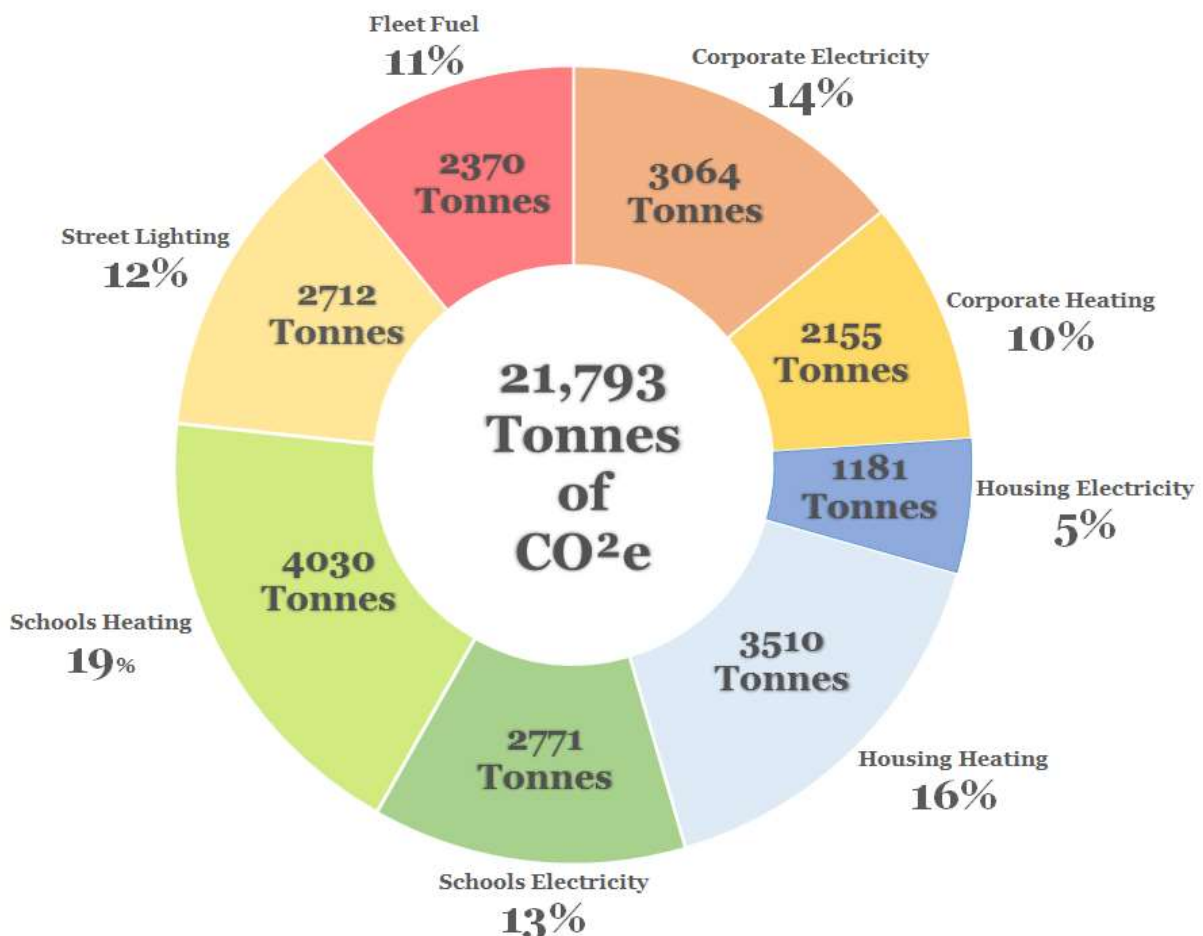
The Carbon Report (CRC) only includes for carbon dioxide (CO₂) emissions arising from non-domestic electricity usage in its operational buildings and from gas supplies using over 73,000 kWh a year.

This briefing provides a summary of our performance in the 2018/19 year, and some context to these figures

2.0 Annual Greenhouse Gas Emissions (GHG)

Brighton & Hove City Council's GHG footprint in 2018/19 was **21,793 tonnes CO₂e**, compared with our 2017/18 footprint of **24,965 tonnes CO₂e** representing an overall annual reduction of **12.7%** against our corporate target of an annual **4%** reduction. The breakdown of our footprint is shown in **Figure 1** below.

Figure 1: 2018/19 overall footprint broken down by energy type & area as a % of the total CO₂e



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Table 1: Total Annual CO₂e Emissions percentage change by area of council.







Financial Year	Corporate	Housing	Schools	Street Lighting	Fleet Fuel	TOTAL
	Annual Comparison - CO ₂ e Emissions (tonnes)					
2017/18	6,362	4,807	7,995	3,396	2,405	24,965
2018/19	5,220	4,690	6,801	2,712	2,370	21,793
	17.95%	2.43%	14.93%	20.14%	1.45%	12.70%
						
	Decrease	Decrease	Decrease	Decrease	Decrease	Decrease

Table 2: Total Annual CO₂e Electricity Emissions percentage change by area of council.










Financial Year	Corporate	Housing	Schools	Street Lighting	TOTAL
	Annual Comparison - Electricity CO ₂ e Emissions (tonnes)				
2017/18	3,997	1,496	3,587	3,396	12,476
2018/19	3,064	1,181	2,771	2,712	9,728
	23.34%	21.06%	22.75%	20.14%	22.03%
					
	Decrease	Decrease	Decrease	Decrease	Decrease

Table 3: Total Annual CO₂e Heating Emissions percentage change by area of council.

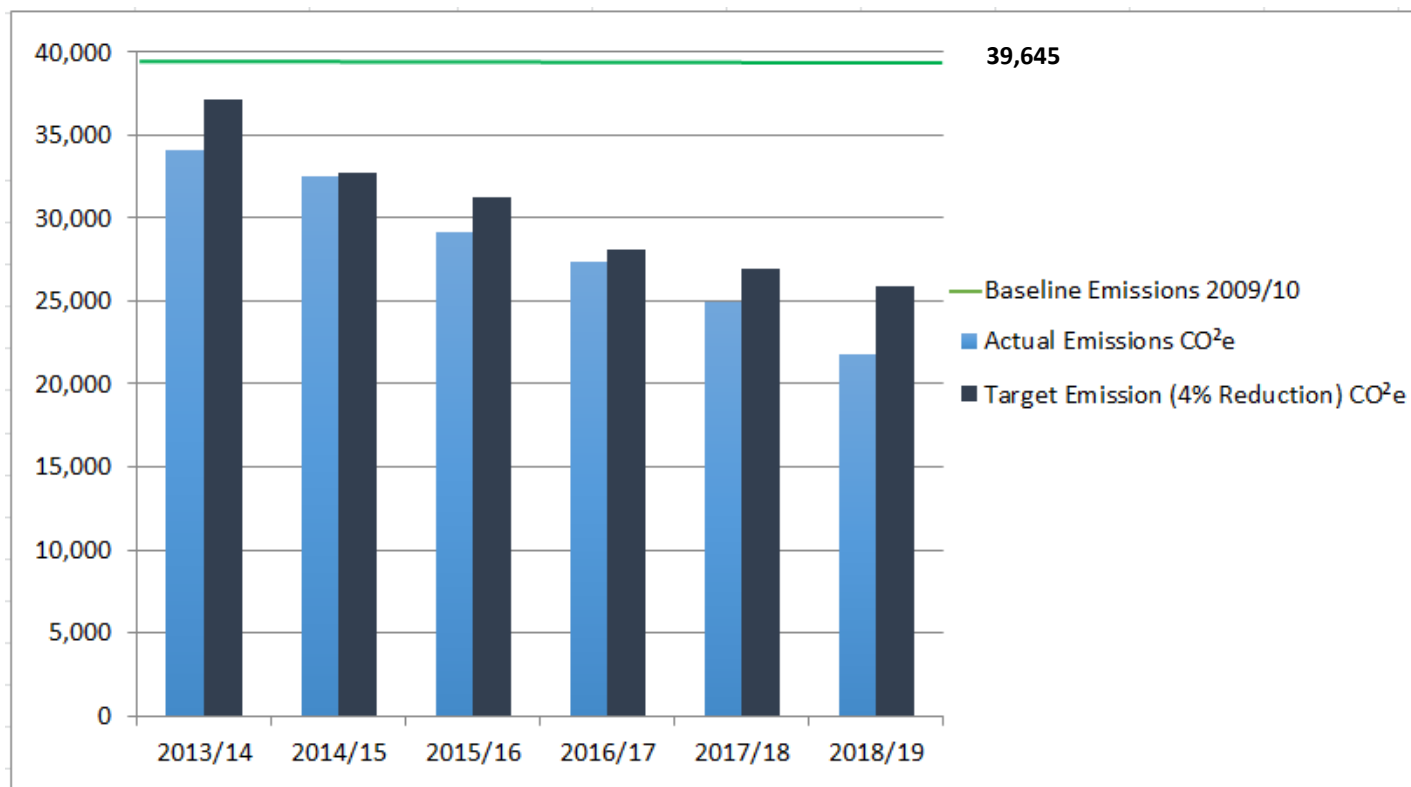
Financial Year	Corporate	Housing	Schools	TOTAL
	Annual Comparison - Heating CO ₂ e Emissions (tonnes)			
2017/18	2,365	3,312	4,408	10,084
2018/19	2,155	3,510	4,030	9,695
	8.88%	5.98%	8.58%	3.86%
				
	Decrease	Increase	Decrease	Decrease

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3.0 Carbon Budgets

In April each year the council set carbon budgets alongside the financial budget to provide accountability in carbon emissions for the following year. A 4% reduction target was set for (landlord level) housing, schools, corporate buildings, street lighting and fleet fuel in 2018/19. Most areas set out action plans for reducing emissions in that year. **Figure 2** below summarises performance by year across all budget areas between 2013/14 & 2018/19. All areas have seen a reduction in emissions over this period, exceeding our target in every year.

Figure 2: Reduction in CO₂e emissions (Tonnes) for carbon budgets 2013/14 – 2018/19.



The table below shows how we have performed against our own internal reduction targets over the last six years and the aggregate total percentage reduction vs our 2009/10 Baseline year (39,645 tonnes CO₂e).

Table 4: Percentage Reduction in CO₂e emissions (Tonnes) for carbon budgets 2013/14 – 2018/19.

Year	Actual Emissions CO ₂ e	Target Emission (4% Reduction) CO ₂ e	% Change Against Previous Year	TOTAL% Change Against 2009/10 Baseline
2013/14	34,111	37,106	-11.75%	-13.96%
2014/15	32,511	32,747	-4.69%	-17.99%
2015/16	29,214	31,211	-10.14%	-26.31%
2016/17	27,377	28,045	-6.29%	-30.94%
2017/18	24,965	26,281	-8.81%	-37.03%
2018/19	21,793	23,966	-12.70%	-45.03%

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4.0 Solar PV Installations

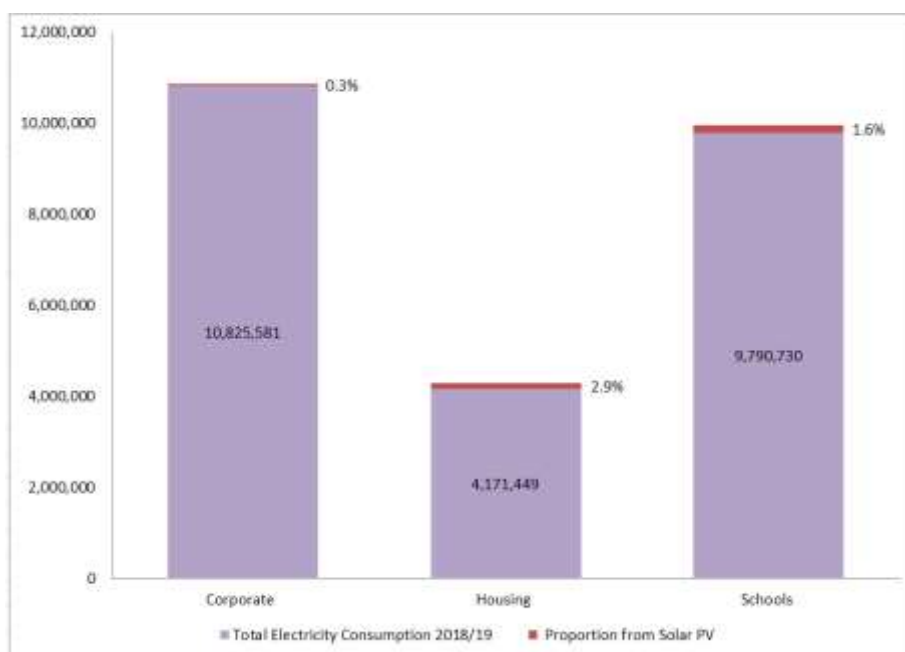
The table below shows a breakdown of commissioned Solar Photovoltaic (PV) panel installations as of April 2019. School installations split into two sections, panels that are owned outright by the schools, and panels that are owned by a third party provider. The arrays in the latter category still produce the same amount of Carbon saving, however the schools buy the electricity produced by the panels at a discounted rate via a Power Purchase Agreement (PPA).

PV arrays on housing property are also split into two sections; installations that provide electricity to communal areas and one that are connected to the tenant's personal supply. In the latter category the panels produce the same Carbon saving but this does not affect the council's internal Carbon footprint as tenanted supplies are outside of reported scope.

Table 4: Current Solar PV capacity, potential yield and estimate annual Carbon Saving.

Area	Installed Net Capacity of Solar 2018/19 (kW)	Est Annual Solar Yield (kWh)	Total Est Annual CO ² e Saving (Tonnes)
Corporate	79	71,922	20.4
Schools (Self-Owned)	102.8	89,919	25.5
Schools (PPA)	260	227,422	64.4
Housing	269.1	240,053	68.0
Housing (Tenant Supplies)	841.76	728,796	206.3
Totals (less Tenant Supplies)	710.9	629,316	178.1

Figure 3: Total annual Electricity consumption (kWh) & proportion provided by Solar PV (assume 50% export)



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5.0 Carbon Reduction Commitment (CRC)

The CRC Energy Efficiency Scheme is a mandatory scheme to improve energy efficiency and therefore cut CO₂ emissions in large public and private sector organisations. All UK bodies with large energy bills (>£50k per annum) have to disclose their annual emissions and purchase CO₂ allowances, designed to incentivise the organisation to reduce emissions and to develop accurate data systems.

The CRC footprint uses CO₂ conversion factors and only requires an organisation to report on electricity usage in its buildings (excluding domestic building usage, street lighting and fleet fuel) and all gas supplies using over 73,000 kWh a year.

In July 2019 we submitted our annual 2018/19 footprint of **8,500 tonnes** CO₂ and this means that we will be surrendering **£140,742** worth of allowances.

Our 2017/18 CRC footprint accounted for **10,375 tonnes** of CO₂ from our buildings and we surrendered **£167,038** worth of CRC allowances – a year on year reduction of **18.07%**.

2018/19 was the last year of the final phase of the CRC Energy Efficiency Scheme. The government have announced that there will be no replacement for the scheme; however they have instead introduced a large increase in the amount of Climate Change Levy (CCL) that is paid on gas and electricity energy bills.