

Finance and Resources Committee

2.00pm, Thursday 18 August 2016

Carbon Reduction Commitment (CRC) Annual Report

Item number	7.13
Report number	
Executive/routine	
Wards	

Executive Summary

This report asks the Committee to note the Council's Carbon Reduction Commitment footprint for the financial year 2015/16 and the submission of the data to the Environment Agency in compliance with legislation.

Links

Coalition Pledges	P50
Council Priorities	
Single Outcome Agreement	S04

Carbon Reduction Commitment (CRC) Annual Report

1. Recommendations

The Committee:

- 1.1 Notes the Council's carbon footprint for the financial year 2015/16; and
- 1.2 Notes the annual report was submitted to the Environment Agency by the statutory deadline of the end of July.

2. Background

- 2.1 The Carbon Reduction Commitment (CRC) is a mandatory reporting scheme to improve energy efficiency in large public and private organisations. The Council has required to comply with CRC since the legislation came into force in 2010.
- 2.2 Organisations that participate are required to monitor their energy use and report their energy supplies annually. An annual report must be submitted by the end of July based on the energy consumed in the previous period from 1 April to 31 March.
- 2.3 To comply with a recommendation from an internal audit of the Council's CRC processes, the Corporate Leadership Team (CLT) approved the content of the annual report on 27 July, prior to its on-line submission.

3. Main report

- 3.1 There are three main energy (gas and electricity) supply categories that the Council must report on under the CRC Scheme. These are:
 - Gas and electricity consumption for Council buildings;
 - Gas and electricity consumption by the Council's property pension portfolio (that qualifies under the rules of the CRC scheme); and
 - Electricity consumption by street lighting, stair lighting and traffic signals.

- 3.2 The following information was included in the annual report submission to the Environment Agency:

Council Building Energy Consumption

Supply	Consumption (kWh)	Emissions (tCO ₂)	Allowances @ £15.60	% of Total Emissions
Electricity	54,292,431	27,567	£430,045	40.18%
Gas	133,580,431	24,740	£385,944	36.06%
TOTAL	187,872,862	52,307	£815,989	76.24%

- 3.3 The 2015/16 reportable CRC emissions for the Council buildings (excluding unmetered supplies and Lothian Pension Fund) were calculated to be 52,307 tCO₂, or 76.24% of total reportable emissions.

Pension Property Portfolio

- 3.4 The Council is currently responsible for reporting the emissions associated with the pension property portfolio (Lothian Pension Fund). The energy consumption data has been validated by Lothian Pensions Fund (Standard Life Investments) and complies with the set validation rules.

Supply	Consumption (kWh)	Emissions (tCO ₂)	Allowances @ £15.60	% of Total Emissions
Electricity	940,204	467	£7,285	0.68%
Gas	359,169	66	£1,030	0.10%
TOTAL	1,299,373	533	£8,315	0.78%

- 3.5 Lothian Pension Fund accounted for 1,299,373kWh of energy which equated to 533tCO₂ or 0.78% of total reportable emissions.

Unmetered Supplies

- 3.6 The CRC scheme moved from Phase 1 to Phase 2 in 2014/15. Under the new phase, all unmetered supplies have to be reported, including street lighting, traffic signals and domestic lighting (stair lighting). It can be difficult to validate unmetered supplies due to there being no physical meter to read. Instead, consumption is based on a schedule which details number of lamps (or traffic units) and burn hours. The information presented in the schedules allows the Distribution Network Operator (DNO) to work out an estimated energy consumption (EAC) and issue an Unmetered Supply Certificate (USC). The Council's electricity supplier uses the USC for invoicing purposes. The certificates are updated each year to reflect any changes in the schedule.

Supply	Consumption (kWh)	Carbon (TCO _{2e})	Allowances @£15.60	% of Total Emissions
Street Lighting	28,144,021	13,970	£217,932	20.36%
Traffic Signals	2,339,860	739	£11,528	1.08%
Festival Lighting	15,384	8	£125	0.01%
Domestic (Lighting and door entry)	2,115,526	1,050	£16,380	1.53%
TOTAL	32,614,791	15,767	£245,965	22.98%

- 3.7 Unmetered supply consumptions account for 15,767 tCO₂, or 22.98% of total reportable carbon emissions. Street Lighting is the largest contributor of unmetered consumption, with street lighting representing 20% of total reportable emissions.

Total Energy Consumption

Source	Consumption (kWh)	Emissions (tCO ₂)	Allowances @ £15.60	%of Total Emissions
Electricity	87,847,426	43,801	£683,295	64%
Gas	133,939,600	24,806	£386,974	36%
TOTAL	221,787,026	68,607	£1,070,269	-

- 3.8 The 2015/16 reportable CRC emissions for the Council are calculated to be 68,607 tCO₂, with 64% of emissions being associated with electricity and 36% associated with gas. The total cost of allowances for 2015/16 is £1,070,269 based on a purchase price of £15.60 per tCO₂.
- 3.9 As noted above, the Council's 2015/16 CRC emissions were 68,607 tCO₂, compared to 73,452 tCO₂ in 2014/15. This equates to a reduction of 4,845 tCO₂ (6.5%). Emissions for electricity have decreased by 6.8%, while gas emissions have decreased by 0.2%. The decrease in carbon emissions is the result of both a reduction in portfolio size (in terms of energy consumption) and a change in carbon emission factors. The carbon emission factors for both electricity and gas can vary between CRC reporting years, depending on where grid energy has been sourced (renewables, nuclear).

- 3.10 All energy data is validated, by confirming meter readings, and comparing the consumption with both the previous year's consumption and with the supplier statement.
- 3.11 Organisations have two windows in which allowances¹ can be purchased, these being April (forecast sale) with payment due in June, or in September (buy to comply sale). Allowances purchased in April attracted a saving of £1.30 per allowance. Council practice has been to purchase allowances in April, thus generating a saving on the costs of CRC. The table below summarise the reduction in emissions and the costs for 2015/16. Unused allowances can be carried forward to the 2016/17 financial year.

	tCO₂
Emissions 2014-15	73,452
Emissions 2015-16	68,607
Emissions Reduction	4,845

Number of allowances purchased in April 2015	75,592
Allocated as follows:	
Applied to 2015/16 carbon footprint	68,607
Carried forward to 2016/17 carbon footprint	6,985

Cost of allowances at September 2016 prices (@£16.90 per allowance)	£1,159,462
Cost of allowances purchased in April 2015 and applied to 2015/16 carbon footprint	£1,070,269
Saving through take up of allowances in the forecast sale	£89,193

¹ One allowance is equivalent to one tCO₂

Reducing Carbon Emissions

- 3.12 Work is underway on a number of key projects to reduce the Council's carbon emissions across the Council's operational property portfolio and contribute to the delivery of pledge 50. The two projects that will have the biggest impact on carbon emissions are the Council's Building Energy Management Systems upgrade programme and the RE:FIT project.
- 3.13 The Council is in the first year of a four-year programme to upgrade Building Energy Management Systems. The upgrade programme is supported by a new BEMS Strategy that sets specific standards for installations including energy performance, with targeted carbon savings of 3,000 tonnes.
- 3.14 The Council is also the first public body in Scotland to adopt the London RE:FIT model. Under the scheme the Council will carry out energy conservation measures in nine key Council properties to deliver carbon savings in excess of 1,500 tonnes.

4. Measures of success

- 4.1 The submission of the Council's annual CRC report in accordance with CRC timescales.

5. Financial impact

- 5.1 The Council's CRC compliance cost for 2014/15 was £1,145,851 (based on £15.60 per tonne of carbon). The Council's CRC compliance cost for 2015/16 is £1,070,269 (based on £15.60 per tonne of carbon). Purchasing allowances as part of the forecast sale has resulted in an £89,193 saving for the Council in the financial year 2015/16 as outlined in the table in paragraph 3.11 above.

6. Risk, policy, compliance and governance impact

- 6.1 Governance in relation to compliance with the CRC scheme across the organisation is enhanced in line with the CRC Handbook (approved by Finance and Resources Committee 17 March 2016).
- 6.2 Reduced risk of financial penalties for late annual report submission.

7. Equalities impact

- 7.1 There are no equalities impacts associated with the content of this report.

8. Sustainability impact

- 8.1 The impacts of this report in relation to the three elements of the Climate Change (Scotland) Act 2009 Public Bodies Duties have been considered. Effective monitoring of energy consumption should lead to informed decision making to reduce the Council's carbon emission footprint.

9. Consultation and engagement

- 9.1 Consultation has taken place with officers in Finance, Corporate Property and Place through the CRC working group which has been established to oversee the Council's compliance with CRC legislation.

10. Background reading/external references

Environment Protection Agency [CRC Phase 2 guidance \(2015\)](#)

CRC Handbook (2016)

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11. Links

Coalition Pledges	P50 Meet greenhouse gas targets, including the national target of 42% by 2020
Council Priorities	
Single Outcome Agreement	SO4 Edinburgh's communities are safer and have improved physical and social fabric
Appendices	