Finance and Resources Committee

10.00am, Thursday, 15 August 2019

Carbon Reduction Commitment (CRC) Annual Report

Executive/routine	
Wards	**All**
Council Commitments	

1. Recommendations

1.1 Notes the Council's carbon footprint for the financial year 2018/19;

1.2 Notes the annual report was submitted to the Environment Agency by the statutory deadline of the end of July;

1.3 Notes that 2018/19 is the final year of reporting under the Carbon Reduction Commitment Energy Efficiency Scheme.

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Report

Carbon Reduction Commitment (CRC) Annual Report

2. Executive Summary

2.1 This report details the Council's Carbon Reduction Commitment carbon footprint for the financial year 2018/19 and the subsequent submission of data to the Environment Agency in compliance with legislation. 2018/19 is the final year of reporting under the Carbon Reduction Commitment Energy Efficiency Scheme (CRC). In response to the closure of CRC, Property and Facilities Management are currently seeking ISO50001 accreditation for their Energy Management System. This system will ensure resilience, rigour and governance is maintained to energy management process.

3. Background

3.1 The Carbon Reduction Commitment (CRC) is a mandatory reporting scheme to improve energy efficiency in large public and private organisations. The Council has been required to comply with the CRC since legislation came into force in 2010.

3.2 Organisations that participate are required to monitor their energy use and report on energy consumption 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.

3.3 For each compliance year, organisations need to pay for and surrender allowances to cover annual CO2 emissions. Organisations have two windows in which allowances can be purchased directly, these being April (forecast sale) with payment due in June, or in September (buy to comply sale). There is also an option to purchase allowances via a market place where organisations can sell surplus allowances. This option will be investigated to determine if it offers an opportunity for the Council to purchase allowances at a reduced rate.

3.4 In March 2016, the Government announced the closure of the CRC Scheme. 2018/19 is the last compliance year. This will therefore be the last report regarding the scheme and the CRC Handbook, as approved by Committee in September 2018, will be retained for audit purposes but will no longer be maintained as a working document.

3.5 In response to the fall in revenue created from the closure of CRC, the UK Government will be increasing Climate Change Levy charges. These charges are applied to the invoicing of eligible electricity and gas supplies increasing directly the cost of energy.

3.6 Property and Facilities Management are currently seeking ISO50001 accreditation for their Energy Management System. The application of a certified Energy Management System will provide resilience and governance to energy management in Property and Facilities Management. This mitigates against the risk of decreased governance and visibility in energy management following the UK Government's closure of the CRC Scheme. Property and Facilities Management appointed The British Standards Institution in April 2019 to support certification of ISO 50001 and the final pre-accreditation audit scheduled for November 2019.

3.7 The Council has approved a new Sustainability Approach which sets a net zero carbon target for Edinburgh by 2030. Under the Sustainability Approach, the Council is commissioning independent research to inform a roadmap for meeting the 2030 targets.

4. Main report

4.1 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 non-domestic 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 and traffic signals.

4.2 The following information has been included in the annual report submission to the Environment Agency:

Total Energy Consumption

Source	Consumption (kWh)	Emissions (tCO_2)	Allowances @ £17.20	%of Total Emissions
Electricity	79,967,744	24,514	£421,641	52.5%
Gas	120,771,682	22,219	£382,167	47.5%
TOTAL	**200,739,426**	**46,733**	**£803,808**	-

4.3 2018/19 reportable CRC emissions for the Council are calculated to be 46,733tCO2, with 52.5% of emissions being associated with electricity and 47.5% associated with gas. The total cost of allowances for 2018/19 is £803,808 This cost is representative based on the advance purchase price of allowances for 2018/19. The actual cost to the Council will depend on whether a reduced price can be sourced through the CRC market place for the remaining allowances required. The maximum potential cost of allowance purchase, along with a breakdown of energy consumption and associated emissions can be found in Appendix 1.

Reported CRC Emissions Footprint

	Emissions (tCO2)	% decrease
Emissions 2014-15	73,452	
Emissions 2015-16	68,607	6.6%
Emissions 2016-17	60,044	12.5%
Emissions 2017-18	55,884	6.9%
Emissions 2018-19	46,733	16.4%
Emissions Reduction (2017/18 to 2018/19)	**9,151**	

4.4 The Council's 2018/19 CRC footprint decreased by 16.4% in comparison to 2017/18 with the annual total emissions for the Council decreasing by 9,151tCO_2. The decrease in carbon emissions can be partly attributed to a decrease in the carbon emission factor for electricity. The emission factor for electricity in 2018/19 is 20% lower than in 2017/18. This is a result of an increasing portion of renewable generation contributing towards grid supplied electricity.

4.5 Electricity consumption reported under the CRC scheme has dropped by 3.3% between 17/18 and 2018/19. Reductions in electricity achieved through the Council's Energy Efficient Street Lighting programme, re-modelling of the property estate and investment in energy efficient technologies will all have had a contributory impact on reduced electricity demand.

4.6 Gas consumption across Council buildings reduced by 8.4% between 17/18 and 2018/19. The milder weather in 2018/19 will have contributed significantly to the reduction in gas across the Council's estate. Continued investment in improving the condition of the Council's estate will also have positively impacted gas consumption. This includes investment in more efficient boiler plant and associated controls and the improved fabric of the buildings.

Overview of Carbon Reduction Projects

4.7 The Energy Efficient Street Lighting Programme, for the conversion of approximately 54,000 street lights across Edinburgh to energy efficient lanterns, is ongoing. The programme will deliver a sustained reduction in electricity consumption, energy costs and carbon use as well as reducing lantern maintenance, replacement and waste disposal costs. Works started in June 2018 and, once complete, will deliver a significant reduction in associated electricity consumption. The full upgrade is programmed to be complete by 31 May 2021.

4.8 The Council is investing significantly in its property estate through the asset management works programme. Whilst the primary focus of these works remains the improvement in the condition of the Council's buildings, there has been a consequential benefit on energy efficiency through works such as boiler replacements, controls upgrades, lighting replacements, window replacements and roof replacements. From an energy management perspective, there is a continued focus on investment and management of the Council's Building Energy Management Systems. In addition to capital funding routes, Property and Facilities Management draws on both SALIX and Council spend to save funding to support energy efficiency projects.

5. Next Steps

5.1 The evidence pack for 2018/19 CRC reporting year will be recorded and stored in line with guidance in the CRC Handbook.

5.2 As this is the final CRC reporting year, no further action will be required to comply with CRC legislation. Carbon reporting will continue through other activities, such as through the Public Bodies Climate Change Duties Report.

6. Financial impact

6.1 The Council's maximum CRC compliance cost for 2018/19 is projected at £808,477. This compares with a cost of £915,471 in 2017/18. This figure assumes that the remaining allowances required for compliance with the CRC scheme need to be purchased at the highest rate of £18.30. Purchasing allowances as part of the forecast sale and using carried forward allowances from 2017/18 has resulted in a projected saving of £46,737 in the 2018/19 financial year. As highlighted, there may be an opportunity to purchase allowances at a lower rate through the CRC market place.

6.2 Following the closure of CRC, the rate charged for climate change levy has increased for eligible energy supplies. This increase will cost the Council an additional £375,364 in climate change levy payments across the CRC portfolio based on 2018/19 consumption levels. The net saving between 2018/19 CRC costs and the forecast increase in climate change level charges in 2018/19 is £428,444.

7. Stakeholder/Community Impact

7.1 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.

8. Background reading/external references

8.1 Environment Protection Agency CRC Phase 2 guidance (2015)

8.2 Carbon Reduction Commitment Annual Report, Finance and Resources Committee, 27 September 2018

8.3 Public Bodies Climate Change Duties Report, Corporate Policy and Strategy Committee, 2 October 2018

8.4 Capital Investment Programme 2018/19 to 2022/23, Finance and Resources Committee, 8 February 2018

9. Appendices

Appendix 1 – Breakdown of CRC Figures

Appendix 1 Breakdown of CRC Figures

The tables presented below provide a breakdown of energy consumption and carbon emissions related to the Council's operational property portfolio, Lothian Pension Fund properties and qualifying unmetered electricity supplies.

Council Building Energy Consumption

Source	Consumption (kWh)	Emissions (tCO2)	Allowances @ £17.20	%of Total Emissions
Electricity	50,014,895	15,384	£264,601	41%
Gas	120,113,935	22,098	£380,089	59%
TOTAL	**170,128,830**	**37,482**	**£644,691**	

Council buildings accounted for 170,128,830kWh of energy which equates to 37,482tCO2 or 80% of total reportable emissions.

Pension Property Portfolio

Supply	Consumption (kWh)	Carbon (TCO2e)	Allowances @ £17.20	% of Total Emissions
Electricity	964,724	294	£5,058	71%
Gas	657,747	121	£2,077	29%
TOTAL	**1,622,471**	**415**	**£7,135**	

Lothian Pension Fund accounted for 1,622,471kWh of energy which equated to 415tCO_2 or 1% of total reportable emissions.   These costs are recovered from Lothian Pension Fund.

Unmetered Supplies

Supply	Consumption (kWh)	Carbon (TCO_{2e})	Allowances @£17.20	% of Total Emissions
Street Lighting	26,702,129	8,139	£139,997	92.1%
Traffic Signals	2,202,951	672	£11,550	7.6%
Festival Lighting	83,045	25	£435	0.3%
TOTAL	**28,988,125**	**8,836**	**£151,982**	

Unmetered supply consumption accounted for 8,836tCO_2, or 19% of total reportable carbon emissions. Street Lighting is the largest contributor of unmetered consumption, with street lighting representing 17.4% of total reportable emissions. Unmetered supplies do not have a meter and consumption is based on a schedule which details the number of lamps (or traffic units) and burn hours.

CRC Allowance Purchases

The information in the table below outlines the purchases of allowances for CRC compliance. Organisations have two windows in which allowances can be purchased, these being April (forecast sale) with payment due in June, or in September (buy to comply sale). Allowances purchased in April in advance of the CRC compliance year attracted a saving of £1.10 per allowance. Council practice has been to purchase allowances in April, thus generating a saving on the costs of CRC. This strategy has been altered for 2018/19, which is the final year of CRC reporting, to mitigate against the risk of having remaining unusable allowances at the end of the CRC scheme. Under this approach, a reduced number of allowances were purchased in the advance sale. Figures in the table below, detail a cost for the remaining balance of required allowances of £18.30 which is the maximum cost the Council will have to pay. As highlighted in the report, there may be an option to secure a lower price for allowances on the CRC market place.

	Allowances	£
Allowances brought forward from 2017/18 (@ cost of £16.60 per allowance)	21,022	£348,966
Allowances purchased in April 2018 (@ cost of £17.20 per allowance)	10,000	£172,000
Allowances purchased (@ a cost of £18.30 per allowance)	15,711	£287,511
Total (max) value of allowances for 2018/19 (final year) scheme compliance	46,733	£808,477

Cost of allowances at September 2019 prices *(@ £18.30 per allowance)*	£855,214
Cost of allowances brought forward from 2017/18 and allowances purchased in April 2018 and purchase of allowances September 2019 (at max rate of £18.30)	£808,477
Minimum saving through take up of allowances in the forecast sale	**£46,737**