

ANGUS COUNCIL

COMMUNITIES COMMITTEE – 13 NOVEMBER 2018

ENERGY ANNUAL REPORT 2017/18

1. INTRODUCTION

This schedule presents the end of year status of the energy consumption, carbon emissions and expenditure on energy supplies for the Councils non-housing properties for 2017/18. Compared to the 2016/17 outcome it shows a 0.3% reduction in energy consumption and a 10.5% reduction in carbon emissions.

2. BACKGROUND

2.1 Report No: 668/10, THE ESTABLISHMENT OF MANAGEMENT ARRANGEMENTS TO FULFIL THE REQUIREMENTS OF THE CARBON REDUCTION COMMITMENT ORDER 2010. Noted and approved by the Strategic Policy Committee at its meeting of 7 September 2010 recommended management arrangements for establishing and implementing continuing appropriate carbon reduction strategies.

2.2 Report No: 611/11, CORPORATE ENERGY CONSUMPTION AND CARBON EMISSIONS REDUCTION TARGETS, noted and approved by the Strategic Policy Committee at its meeting of 06 September 2011 adopted the following Council uncorrected weather based reduction targets:

- 22.5% carbon dioxide emissions reduction by 2020 compared to the 2010/11 base
- 13.5% energy consumption reduction by 2020 compared to the 2010/11 base

2.3 Service Directorates have provision within their budgets for energy costs. However responsibility for the overall management of these budgets and the provision of budget monitoring information rests with the Head of Infrastructure.

2.4 Assets currently manages the fuel contracts for all non-housing properties within the Council and maintains an overview, in conjunction with the Finance Service, of the rate of expenditure on the associated budgets.

3. CURRENT POSITION

Energy Consumption

3.1 The energy consumption status, as at 31 March 2018 is detailed in Table 1 and **Appendix 1**, below these figures reflect only the consumption made against presented invoices.

Table 1	Total Budget Consumption kWh	Total Actual Consumption kWh	Difference kWh	Percentage Consumption to Budget
2015/16	71,920,236	66,493,247	5,426,989	92%
2016/17	71,364,359	63,300,290	8,064,069	89%
2017/18	67,934,916	63,094,237	4,840,679	93%
	Reduction between years	-206,053	-0.3%	

See **Appendix 1** below for the directorate breakdown of Table 1

3.2 Table 1 shows a 206,053 kWh reduction in energy consumption which equates to a 0.3% reduction compared with the previous financial year.

- 3.3 The performance by individual directorates is detailed in **Appendix 1** below, notes have been added where there are significant differences between budgeted and the metered consumption.

Carbon Emissions

- 3.4 The carbon emissions status, as at 31 March 2018 is detailed in Table 2 and **Appendix 2** below, these figures reflect only the carbon emissions associated with the consumption made against presented invoices.

Table 2	Total Budget Emissions kg	Total Actual Emissions kg	Difference kg	Percentage Emissions to Budget
2015/16	22,103,827	20,339,102	1,764,725	92%
2016/17	20,234,096	18,007,127	2,226,969	89%
2017/18	17,131,623	16,123,124	1,008,499	94%
	Reduction between years	-1,884,003	-10.5%	

See **Appendix 2** below for the directorate breakdown of Table 2

- 3.5 Table 2 shows a 1,884,003 kg reduction in carbon emissions compared to the previous financial year. This equates to a 10.5% reduction. The reduction is due to a combination of reduced energy consumption and a reduction in the conversion factor for electricity as the electricity generation becomes more decarbonised.
- 36 The performance by individual directorates, is detailed in **Appendix 2**, notes have been added where there are significant differences between budgeted and actual emissions.

Expenditure on Energy

- 3.7 The expenditure status, as at 31 March 2018 is detailed in Table 3 and **Appendix 3** below, these figures reflect only the payments made against presented invoices and end of year accruals

Table 3	Budget Volume £	Total Spend £	Difference £	Percentage Spend to Budget
2015/16	£5,736,000	£4,520,964	£1,215,036	79%
2016/17	£5,174,562	£4,533,876	£640,686	88%
2017/18	£4,786,000	£4,542,256	£243,744	95%
	Increase between years	+£8,380	+0.18%	

See **Appendix 3** below for the directorate breakdown of Table 3

- 3.8 Table 3 shows an underspend compared to the budget of £243,744 for 2017/18 and small increase of £8,380 in energy expenditure compared to the previous financial year.
- 3.9 The performance by individual directorates is detailed in **Appendix 3** below, notes have been added where there are significant differences between the budgeted and spend amounts
- 3.10 A graph showing the overall progress made towards achieving the Council's carbon reduction target is detailed in **Appendix 4** below. The graph shows that the Council has achieved its target three years ahead of profile. This was due to a combination of reduced energy consumption and a large reduction in the conversion factor for the generation of electricity which takes account of the increased use of sources of renewable electricity generation.

6. FINANCIAL IMPLICATIONS

- 6.1 Table 3 and **Appendix 3** below shows an underspend of £243,744 for 2017/18, compared to the budget, and a small increase in energy expenditure of £8,380 compared to financial year 2016/17, across the various energy cost headings. This underspend has been progressed on a managed basis and absorbed within the cash limited budgets available to Council directorates.

REPORT AUTHOR - Ian Cochrane, Head of Infrastructure
E-mail: Communities@angus.gov.uk

List of Appendices to this schedule:

Appendix 1	2017/18 Energy Consumption Status
Appendix 2	2017/18 Carbon Emissions Status
Appendix 3	2017/18 Expenditure on Energy Status
Appendix 4	Overall Carbon Emissions Graph

Appendix 1 2017/18 Energy Consumption Status

	Actual Consumption per Fuel in kWh							Budget (kWh)	% to Budget
	Electricity	Gas	Kerosene	Gas Oil	LPG	Biomass	Total (kWh)		
People Directorate	9,974,768	20,649,876	654,854	402,377		888,997	32,570,872	33,071,778	98%
Integrated Joint Board	1,577,254	2,464,488	104770			202,068	4,348,580	4,683,075	93%
Place Directorate	5,815,816	8,352,440	128941		34,991	981,708	15,313,896	17,938,469	85%
Chief Executive	435,773	532,830					968,603	1,080,521	90%
Other Services	7,233						7,233	39,322	18%
Sub Totals	17,810,844	31,999,634	888,565	402,377	34,991	2,072,773	53,209,184	56,813,165	94%
Common Good	24,468						24,468	18,085	135%
Place Directorate - HRA	1,542,058	3,350,278				172,132	5,064,468	5,603,666	90%
Place Directorate - Street Lighting	4,796,117						4,796,117	5,500,000	87%
Sub Totals	6,362,643	3,350,278				172,132	9,885,053	11,121,751	89%
Total	24,173,487	35,349,912	888,565	402,377	34,991	2,244,905	63,094,237	67,934,916	93%

a

b

Notes:

Generally the reduction in consumption can be attributed to a combination of a reduction in the energy consumption associated with, street lighting, various energy conservation projects and adherence to the heating temperatures and times adopted by the Council.

- a The large percentage underspend in Other Services was due to consumption for Christmas lighting being included in the Streetlighting budget.
- b The additional energy consumption in Common Good was due to the increased use of the bore hole pump at Keptie Pond in Arbroath and the increased use of William Lamb Studio.

Appendix 2 2017/18 Carbon Emissions Status

	Actual Emissions per Fuel in kg CO ₂						Total (kg CO ₂)	Budget (kg CO ₂)	% to Budget
	Electricity	Gas	Kerosene	Gas Oil	LPG	Biomass			
People Directorate	3,804,975	3,795,654	168,831	109,290		23,114	7,901,864	7,933,498	100%
Integrated Joint Board	601,659	452,997	27011			5254	1,086,921	1,184,008	92%
Place Directorate	2,218,501	1,535,262	33243		7494	25524	3,820,024	4,259,351	90%
Chief Executive	166,230	97,939					264,169	302,662	87%
Other Services	2,759						2,759	15,000	18%
Sub Totals	6,794,124	5,881,852	229,085	109,290	7,494	53,892	13,075,737	13,694,519	95%
Common Good	9,334						9,334	6,899	135%
Place Directorate - HRA	588,234	615,815				4,475	1,208,524	1,332,176	91%
Place Directorate - Street Lighting	1,829,527						1,829,527	2,098,030	87%
Sub Totals	2,427,095	615,815	0	0	0	4,475	3,047,385	3,437,105	89%
Total	9,221,219	6,497,667	229,085	109,290	7,494	58,367	16,123,124	17,131,623	94%

a

b

Generally the reduction in consumption can be attributed to a combination of a reduction in the energy consumption associated with, street lighting, various energy conservation projects and adherence to the heating temperatures and times adopted by the Council.

- a The large percentage underspend in Other Services was due to carbon emissions for Christmas lighting being included in the Streetlighting budget.
- b The additional energy consumption in Common Good was due to the increased use of the bore hole pump at Keptie Pond in Arbroath and the increased use of William Lamb Studio.

Appendix 3 2017/18 Expenditure on Energy Status

	Actual Expenditure per Fuel in £						Budget (£)	% to Budget
	Electricity	Gas	Oil	LPG	Biomass	Total (£)		
Centralised Energy Management						£145,935	£160,000	91%
SALIX - Energy Efficiency Fund	£59,396	£23,961	£895			£139,647	£84,000	166%
SALIX - Transfer to Roads							£40,000	
People Directorate	£1,374,950	£509,905	£45,070		£66,802	£1,996,727	£1,984,000	101%
Integrated Joint Board	£197,953	£52,778	£3,316		£10,071	£264,118	£320,000	83%
Place Directorate	£780,762	£191,544	£5,277	£2,904	£42,115	£1,022,602	£1,178,000	87%
Chief Executive	£72,585	£19,546				£92,131	£85,000	108%
Other Services	£2,914	£89				£3,004	£6,000	50%
Sub Totals	£2,488,560	£797,823	£54,558	£2,904	£118,988	£3,664,164	£3,857,000	95%
Common Good	£1,791	£13				£1,804	£4,000	45%
Place Directorate - HRA	£202,615	£79,294			£8,579	£290,488	£327,000	89%
Place Directorate - Street Lighting	£585,800					£585,800	£598,000	98%
Sub Totals	£790,206	£79,307			£8,579	£878,092	£929,000	95%
Total	£3,278,766	£877,130	£54,558	£2,904	£127,567	£4,542,256	£4,786,000	95%

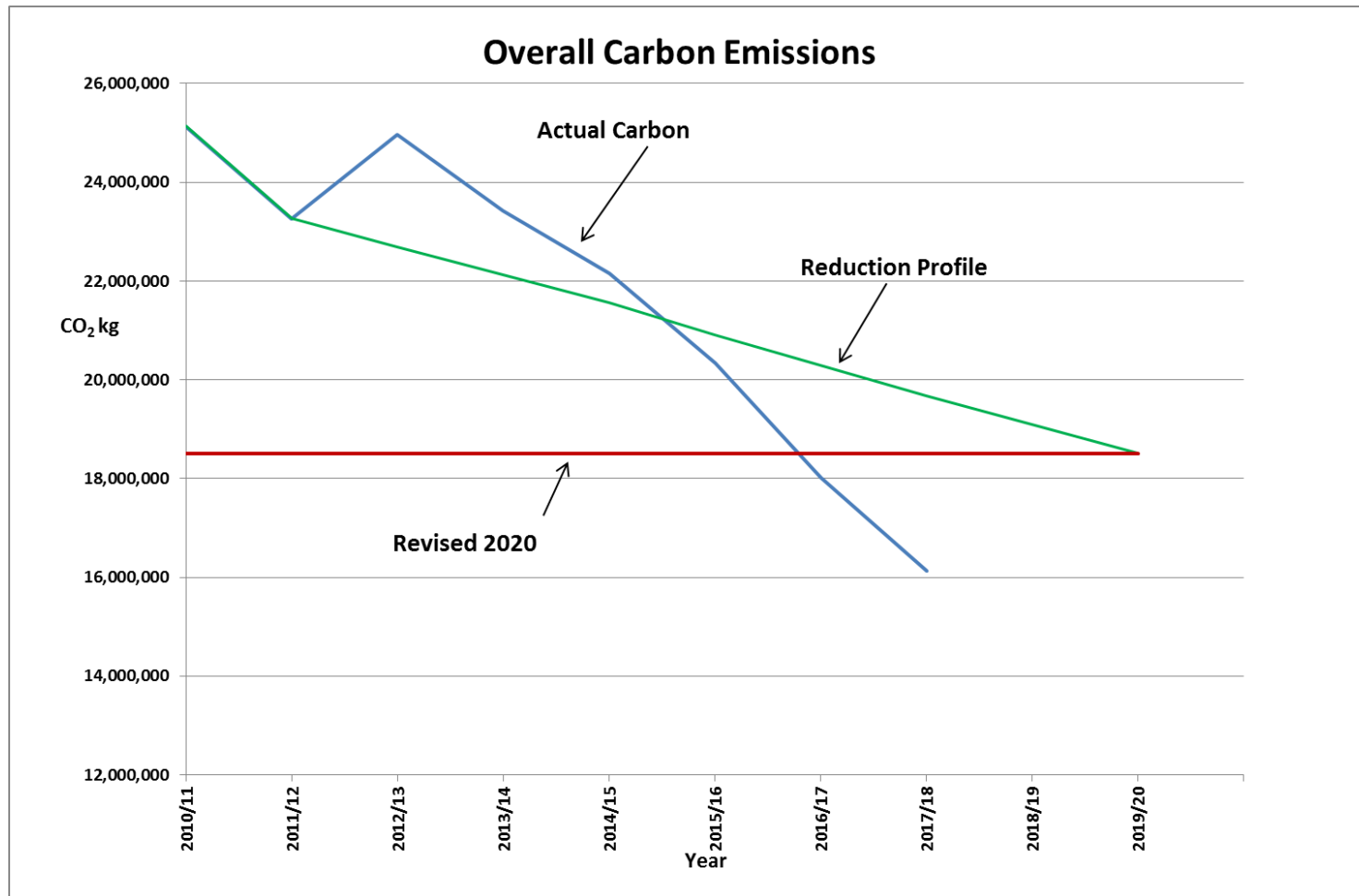
a

b

Notes:

- a The large percentage underspend in Other Services was due to expenditure for Christmas lighting being included in the Streetlighting budget.
- b At William Lamb Studio, our electricity supplier didn't use the meter reads we provided at the end of March 2018, due to this they issued an incorrectly low estimated invoice.

Appendix 4 Overall Carbon Emissions Graph



The graph shows that the 2020 carbon reduction target has been achieved. The rapid reduction was due to a combination of reduced energy consumption and the a large reduction in the conversion factor for the generation of electricity which takes account of the increased use of sources of renewable electricity generation.