

## ANGUS COUNCIL

## POLICY &amp; RESOURCES COMMITTEE – 8 OCTOBER 2019

## ENERGY ANNUAL REPORT 2018/19

**1. INTRODUCTION**

This report presents the end of year status of the energy consumption, carbon emissions and expenditure on energy supplies for the Council's non-housing properties for 2018/19. Compared to the 2017/18 outcome it shows a 7.7% reduction in energy consumption and a 17.3% 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.

Report No: 294/15, CORPORATE CARBON DIOXIDE AND ENERGY CONSUMPTION REDUCTION TARGETS, noted and approved by the Communities Committee at its meeting of 18 August 2015, adopted increased targets from 2016/17 to 2019/20. The carbon emissions target was increased from 2.5% to 3% per annum and the energy consumption target increased from 1.5% to 2.5% per annum, for the remaining four years.

Since both targets have been met, new targets based on the Scottish Government's Climate Change Plan - Third Report on Proposals and Policies (2018-2032) are to be agreed. The Climate Change Plan sets out ambitious decarbonisation plans for meeting greenhouse gas emissions reduction targets to 2032, in line with the Climate Change (Scotland) Order 2015. In order to deliver and meet these requirements we will make the appropriate capital fund bids.

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 Director 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 Corporate Improvement and Finance Services, of the rate of expenditure on the associated budgets.

**3. CURRENT POSITION****Energy Consumption**

3.1 The energy consumption status, as at 31 March 2019 is detailed in Table 1 and **Appendix 1**, these figures reflect only the consumption made against presented invoices.

<b>Table 1</b>	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%
<b>2018/19</b>	<b>65,624,820</b>	<b>58,207,839</b>	<b>7,416,981</b>	<b>89%</b>
	Change between years	<b>-4,886,398</b>	<b>-7.7%</b>	

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

- 3.2 Table 1 shows a 4,886,398 kWh reduction in energy consumption which equates to a 7.7% reduction compared with the previous financial year.
- 3.3 The performance by individual directorates is detailed in **Appendix 1**, 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 2019 is detailed in Table 2 and **Appendix 2**, these figures reflect only the carbon emissions associated with the consumption made against presented invoices.

<b>Table 2</b>	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%
<b>2018/19</b>	<b>14,564,211</b>	<b>13,336,819</b>	<b>1,227,392</b>	<b>92%</b>
	Change between years	<b>-2,786,305</b>	<b>-17.3%</b>	

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

- 3.5 Table 2 shows a 2,786,305 kg reduction in carbon emissions compared to the previous financial year. This equates to a 17.3% 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.
- 3.6 The performance by individual directorates, is detailed in **Appendix 2**, notes have been added where there are significant differences between budgeted and actual emissions.
- 3.7 A graph showing the overall progress made towards achieving the Council's carbon reduction target is detailed in **Appendix 4**. 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.

### **Expenditure on Energy**

- 3.8 The expenditure status, as at 31 March 2019 is detailed in Table 3 and **Appendix 3**, these figures reflect only the payments made against presented invoices and end of year accruals

<b>Table 3</b>	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%
<b>2018/19</b>	<b>£4,971,464</b>	<b>£4,533,223</b>	<b>£438,241</b>	<b>91%</b>
	Change between years	<b>-£9,033</b>	<b>-0.20%</b>	

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

3.9 Table 3 shows an underspend compared to the budget of £438,241 for 2018/19 and a decrease of £9,033 in energy expenditure compared to the previous financial year.

3.10 The performance by individual directorates is detailed in **Appendix 3**, notes have been added where there are significant differences between the budgeted and spend amounts

#### **4. FINANCIAL IMPLICATIONS**

4.1 Table 3 and **Appendix 3** shows an underspend of £438,241 for 2018/19, compared to the budget, and a decrease in energy expenditure of £9,033 compared to financial year 2017/18, 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.

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Appendix 1	2018/19 Energy Consumption Status
Appendix 2	2018/19 Carbon Emissions Status
Appendix 3	2018/19 Expenditure on Energy Status
Appendix 4	Overall Carbon Emissions Graph

## 2018/19 Energy Consumption Status

## Actual Consumption per Fuel in kWh

Directorate	Electricity	Gas	Kerosene	Gas Oil	LPG	Biomass	Total (kWh)	Budget (kWh)	% to Budget
People Directorate	9,702,260	18,418,974	611,848	339,726	0	634,072	29,706,880	31,986,244	93%
Integrated Joint Board	1,030,662	2,300,164	0	0	0	117,774	3,448,600	3,626,704	95%
Place Directorate	4,674,625	6,832,809	84235	0	27,173	500,700	12,119,542	15,230,416	80%
Chief Executive	261,094	362,623	0	0	0	0	623,717	767,035	81%
Other Services	6,701	0	0	0	0	0	6,701	39,432	17%
Facilities Management	1,509,098	1644697	0	0	0	0	3,153,795	4,399,108	72%
<b>Sub Totals</b>	<b>17,184,440</b>	<b>29,559,267</b>	<b>696,083</b>	<b>339,726</b>	<b>27,173</b>	<b>1,252,546</b>	<b>49,059,235</b>	<b>56,048,939</b>	<b>88%</b>
Common Good	19,563	0	0	0	0	0	19,563	24,216	81%
Place Directorate - HRA	1,427,353	3,299,003	0	0	0	100,326	4,826,682	5,151,665	94%
Place Directorate - Street Lighting	4,302,359	0	0	0	0	0	4,302,359	4,400,000	98%
<b>Sub Totals</b>	<b>5,749,275</b>	<b>3,299,003</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100,326</b>	<b>9,148,604</b>	<b>9,575,881</b>	<b>96%</b>
<b>Total</b>	<b>22,933,715</b>	<b>32,858,270</b>	<b>696,083</b>	<b>339,726</b>	<b>27,173</b>	<b>1,352,872</b>	<b>58,207,839</b>	<b>65,624,820</b>	<b>89%</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 street lighting budget.
- b Full budgets were allowed for properties which subsequently became vacant.

## 2018/19 Carbon Emissions Status

Actual Emissions per Fuel in kg CO<sub>2</sub>

Directorate	Electricity	Gas	Kerosene	Gas Oil	LPG	Biomass	Total (kg CO <sub>2</sub> )	Budget (kg CO <sub>2</sub> )	% to Budget
People Directorate	2,957,443	3,382,092	157,744	92,273	0	16,486	6,606,038	6,959,253	95%
Integrated Joint Board	314,166	422,356	0	0	0	3062	739,584	774,081	96%
Place Directorate	1,424,919	1,254,640	21,717	0	5820	13018	2,720,114	3,110,870	87%
Chief Executive	79,587	66,585	0	0	0	0	146,172	179,361	81%
Other Services	2,043	0	0	0	0	0	2,043	12,020	17%
Facilities Management	460,003	301999	0	0	0	0	762,002	1,075,612	71%
<b>Sub Totals</b>	<b>5,238,161</b>	<b>5,427,672</b>	<b>179,461</b>	<b>92,273</b>	<b>5,820</b>	<b>32,566</b>	<b>10,975,953</b>	<b>12,111,197</b>	<b>91%</b>
Common Good	5,963	0	0	0	0	0	5,963	7,382	81%
Place Directorate - HRA	435,086	605,763	0	0	0	2,608	1,043,457	1,104,426	94%
Place Directorate - Street Lighting	1,311,445	0	0	0	0	0	1,311,445	1,341,208	98%
<b>Sub Totals</b>	<b>1,752,494</b>	<b>605,763</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,608</b>	<b>2,360,865</b>	<b>2,453,016</b>	<b>96%</b>
<b>Total</b>	<b>6,990,655</b>	<b>6,033,435</b>	<b>179,461</b>	<b>92,273</b>	<b>5,820</b>	<b>35,174</b>	<b>13,336,818</b>	<b>14,564,213</b>	<b>92%</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 consumption for Christmas lighting being included in the street lighting budget.
- b Full budgets were allowed for properties which subsequently became vacant.

## 2018/19 Expenditure on Energy Status

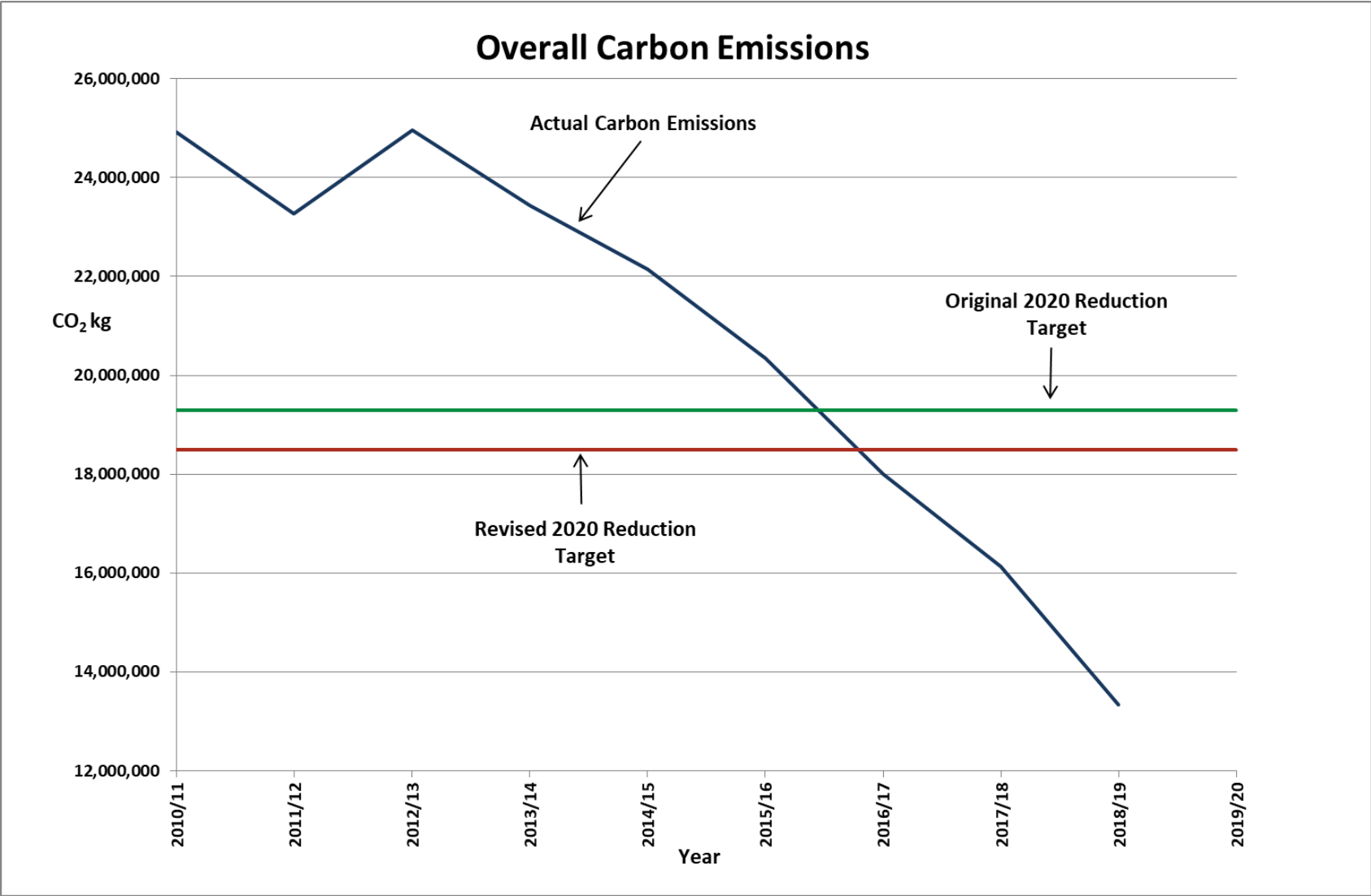
## Actual Expenditure per Fuel in £

Directorate/ Budget	Electricity	Gas	Oil (Kerosene & Gas Oil)	LPG	Biomass	Total (£)	Budget (£)	% to Budget
Centralised Energy Management						£102,825	£123,000	84%
SALIX - Energy Efficiency Fund	£131,337	£12,237	£74			£143,648	£143,648	100%
People Directorate	£1,329,335	£477,410	£47,399	£2,319	£54,230	£1,910,693	£2,092,363	91%
Integrated Joint Board	£150,051	£61,295	£0	£0	£6,388	£217,734	£257,933	84%
Place Directorate	£644,836	£177,906	£4,615	£0	£23,544	£850,901	£1,062,450	80%
Chief Executive	£34,853	£12,134	£0	£0	£0	£46,987	£59,978	78%
Other Services	£3,629	£88	£0	£0	£0	£3,717	£6,620	56%
Facilities Management	£216,288	£55,156	£1,011	£0	£0	£272,455	£359,656	76%
<b>Sub Totals</b>	<b>£2,510,329</b>	<b>£796,226</b>	<b>£53,099</b>	<b>£2,319</b>	<b>£84,162</b>	<b>£3,548,960</b>	<b>£4,105,648</b>	<b>86%</b>
Common Good	£4,681	£82	£0	£0	£0	£4,763	£4,392	108%
Place Directorate - HRA	£232,785	£100,020	£0	£0	£5,442	£338,247	£328,959	103%
Place Directorate - Street Lighting	£641,253	£0	£0	£0	£0	£641,253	£532,465	120%
<b>Sub Totals</b>	<b>£878,719</b>	<b>£100,102</b>	<b>£0</b>	<b>£0</b>	<b>£5,442</b>	<b>£984,263</b>	<b>£865,816</b>	<b>114%</b>
<b>Total</b>	<b>£3,389,048</b>	<b>£896,328</b>	<b>£53,099</b>	<b>£2,319</b>	<b>£89,604</b>	<b>£4,533,223</b>	<b>£4,971,464</b>	<b>91%</b>

## Notes:

- a** Other Services: Christmas lighting was included in the street lighting, not Other Services.
- b** Common Good: Billing issues at William Lamb Studio discovered after year end accruals; now resolved, refund received.
- c** Place Directorate – HRA: £18,445 of housing capital electricity costs and £2,690 of housing capital gas costs were wrongly charged against energy ledger codes.
- d** Place Directorate – Street Lighting: Overspend due to two invoices for the period 01/01/2019 to 31/01/2019 being paid. The double payment is being recovered.

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.

New targets based on the Scottish Governments Climate Change Plan - Third Report on Proposals and Policies (2018-2032) are to be agreed. The Climate Change Plan sets out ambitious decarbonisation plans for meeting greenhouse gas emissions reduction targets to 2032, in line with the Climate Change (Scotland) Order 2015. In order to deliver and meet these requirements we will make the appropriate capital fund bids.