

ANGUS COUNCIL

POLICY & RESOURCES COMMITTEE – 7 DECEMBER 2021

ENERGY ANNUAL REPORT 2020/21

ABSTRACT

This report provides information to members with regard to services in the Infrastructure Services Directorate, albeit that a decision is not required in terms of the current Scheme of Delegation to Officers and the Order of Reference of Committees.

1. INTRODUCTION

- 1.1 This report presents the end of year status of the energy consumption, carbon emissions and expenditure on energy supplies for the Councils non-housing properties for 2020/21. Compared to the 2019/20 outcome it shows a 3.9% reduction in energy consumption and a 9.4% 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.

In May 2019, the Scottish Government lodged an amendment to the Climate Change Scotland Act 2009 to increase the emissions target to 'net zero' by 2045. This was on the back of the Scottish Government declaring a 'Climate Emergency' in April 2019.

In September 2019 the Climate Change (Emission Reduction Targets) (Scotland) Act was passed; it amends the Climate Change (Scotland) Act 2009 target to 'net zero' CO₂ emissions by 2045 and sets interim CO₂ emissions reduction targets of 56% by 2020, 75% by 2030 and 90% by 2040 from the 1990/1995 baseline. Angus Council will adopt these targets and aim for the Councils non-domestic buildings to be 'net zero' by 2045. In order to deliver these requirements a report will be prepared identifying how the Council will assist in meeting these ambitious figures and where required 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 2021 is detailed in Table 1 and **Appendix 1**, 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
2017/18	67,934,916	63,094,237	4,840,679	93%
2018/19	65,624,820	58,207,839	7,416,981	89%
2019/20	64,919,188	57,473,453	7,445,735	89%
2020/21	66,144,323	55,215,470	10,928,853	83%
	Change between years	-2,257,983	-3.9%	

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

- 3.2 Table 1 shows a 2,257,983 kWh reduction in energy consumption which equates to a 3.9% 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 2021, is detailed in Table 2 and **Appendix 2**, 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
2017/18	17,131,623	16,123,124	1,008,499	94%
2018/19	14,564,211	13,336,819	1,227,392	92%
2019/20	13,670,692	12,408,631	1,262,061	91%
2020/21	13,371,961	11,243,868	2,128,093	84%
	Change between years	-1,164,763	-9.4%	

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

- 3.5 Table 2 shows a 1,164,763 kg reduction in carbon emissions compared to the previous financial year. This equates to a 9.4% 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 New carbon emissions reduction targets based on the Scottish Governments Climate Change (Emission Reduction Targets) (Scotland) Act are required,. In order to track the progress in regard to reaching the 'net zero' target by 2045 a graph showing the overall progress made towards achieving the Council's interim carbon reduction target of a 75% reduction by 2030 is detailed in **Appendix 4**. A further graph showing the overall progress required towards achieving the Council's 'net zero' target by 2045 is detailed in Appendix 5. The figures shown start from our emission level on 2011/12 as our base year from which the Council has meet its' reduction target however the Climate Change Act use 1990 as the base year which the Council doesn't hold information on. The reduction profile is taken from our 2011/12 base year which will show us as behind the target at this time which is not the case. The Council will still have to hit the 'net zero' emissions target notwithstanding the base year used and this will require significant effort and funding to achieve it.
- 3.8 Carbon emissions associated with energy consumption are reported in the statutory Public Bodies Climate Change Duties report.

Expenditure on Energy

- 3.9 The expenditure status, as at 31 March 2021 is detailed in Table 3 and **Appendix 3**, 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
2017/18	£4,786,000	£4,542,256	£243,744	95%
2018/19	£4,971,464	£4,533,223	£438,241	91%
2019/20	£5,085,402	£4,595,612	£489,790	90%
2020/21	£5,208,000	£4,120,135	£1,087,865	79%
	Change between years	-£475,477	-10.35%	

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

- 3.10 Table 3 shows an underspend compared to the budget of £1,087,865 for 2020/21 and a reduction of £475,477 in energy expenditure compared to the previous financial year.
- 3.11 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
- 3.12 The impact of Covid-19 resulting in reduced property occupation and operation across the whole Council estate, has been the main reason behind the decrease in emissions and expenditure in 2020/21 compared to previous years.

4. FINANCIAL IMPLICATIONS

- 4.1 Table 3 and **Appendix 3** shows an underspend of £1,087,865 for 2020/21, compared to the budget, and a reduction in energy expenditure of £475,477 compared to financial year 2019/20, 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 2020/21 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	7,635,413	21,950,133	632,273	425,622	0	511,520	31,154,961	32,789,210	95%
Angus Health & Social Care Partnership	961,052	2,147,394	0	0	0	152,982	3,261,428	3,593,145	91%
Place Directorate	3,527,372	4,233,124	110,828	0	29,297	346,816	8,247,437	14,552,037	57%
HR, Digital Enablement & Business Support	271,015	0	0	0	0	0	271,015	342,100	79%
Legal & Democratic	0	58290	0	0	0	0	58,290	47,000	124%
Facilities Management	1,276,782	2497500	0	0	0	0	3,774,282	4,372,681	86%
Other Services	6,354	0	0	0	0	0	6,354	14,534	44%
Sub Totals	13,677,988	30,886,441	743,101	425,622	29,297	1,011,318	46,773,767	55,710,707	84%
Common Good	33,101	0	0	0	0	0	33,101	22,050	150%
Place Directorate - HRA	1,365,599	3,671,367	0	0	0	130,318	5,167,284	6,011,566	86%
Place Directorate - Street Lighting	3,241,320	0	0	0	0	0	3,241,320	4,400,000	74%
Sub Totals	4,640,020	3,671,367	0	0	0	130,318	8,441,705	10,433,616	81%
Total	18,318,008	34,557,808	743,101	425,622	29,297	1,141,636	55,215,470	66,144,323	83%

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. But this year, Covid-19 has affected the property occupation and operation across the whole Council estate, and increased energy consumption due to increased ventilation, and in turn, heating requirements.

Legal & Democratic: Overspend is due to an increase in gas consumption.

Other services: The large percentage underspend in Other Services was due to too high a budget allowed for war memorial lighting.

Common Good: Overspend is due to overestimated electricity invoices at William Lamb Studio – unable to gain access to obtain actual meter reads.

Appendix 2 2020/21 Carbon Emissions Status

Actual Emissions per Fuel in kg CO₂

Directorate	Electricity	Gas	Kerosene	Gas Oil	LPG	Biomass	Total (kg CO ₂)	Budget (kg CO ₂)	% to Budget
People Directorate	1,915,802	4,028,288	155,172	107,958	0	4,051	6,211,271	6,586,116	94%
Angus Health & Social Care Partnership	241,138	394,090	0	0	0	1212	636,440	693,568	92%
Place Directorate	885,053	776,863	27,199	0	6276	2747	1,698,138	2,762,124	61%
HR, Digital Enablement & Business Support	68,000	0	0	0	0	0	68,000	85,836	79%
Legal & Democratic	0	10697	0	0	0	0	10,697	8,625	124%
Facilities Management	320,357	458341	0	0	0	0	778,698	937,382	83%
Other Services	1,594	0	0	0	0	0	1,594	3,647	44%
Sub Totals	3,431,944	5,668,279	182,371	107,958	6,276	8,010	9,404,838	11,077,298	85%
Common Good	8,305	0	0	0	0	0	8,305	5,533	150%
Place Directorate - HRA	342,643	673,769	0	0	0	1,032	1,017,444	1,185,125	86%
Place Directorate - Street Lighting	813,279	0	0	0	0	0	813,279	1,104,004	74%
Sub Totals	1,164,227	673,769	0	0	0	1,032	1,839,028	2,294,662	80%
Total	4,596,171	6,342,048	182,371	107,958	6,276	9,042	11,243,868	13,371,960	84%

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. But this year, Covid-19 has affected the property occupation and operation across the whole Council estate, and increased energy consumption due to increased ventilation, and in turn, heating requirements.

Legal & Democratic: Overspend is due to an increase in gas consumption.

Other services: The large percentage underspend in Other Services was due to too high a budget allowed for war memorial lighting.

Common Good: Overspend is due to overestimated electricity invoices at William Lamb Studio – unable to gain access to obtain actual meter reads.

Appendix 3 2020/21 Expenditure on Energy Status

Actual Expenditure per Fuel in £

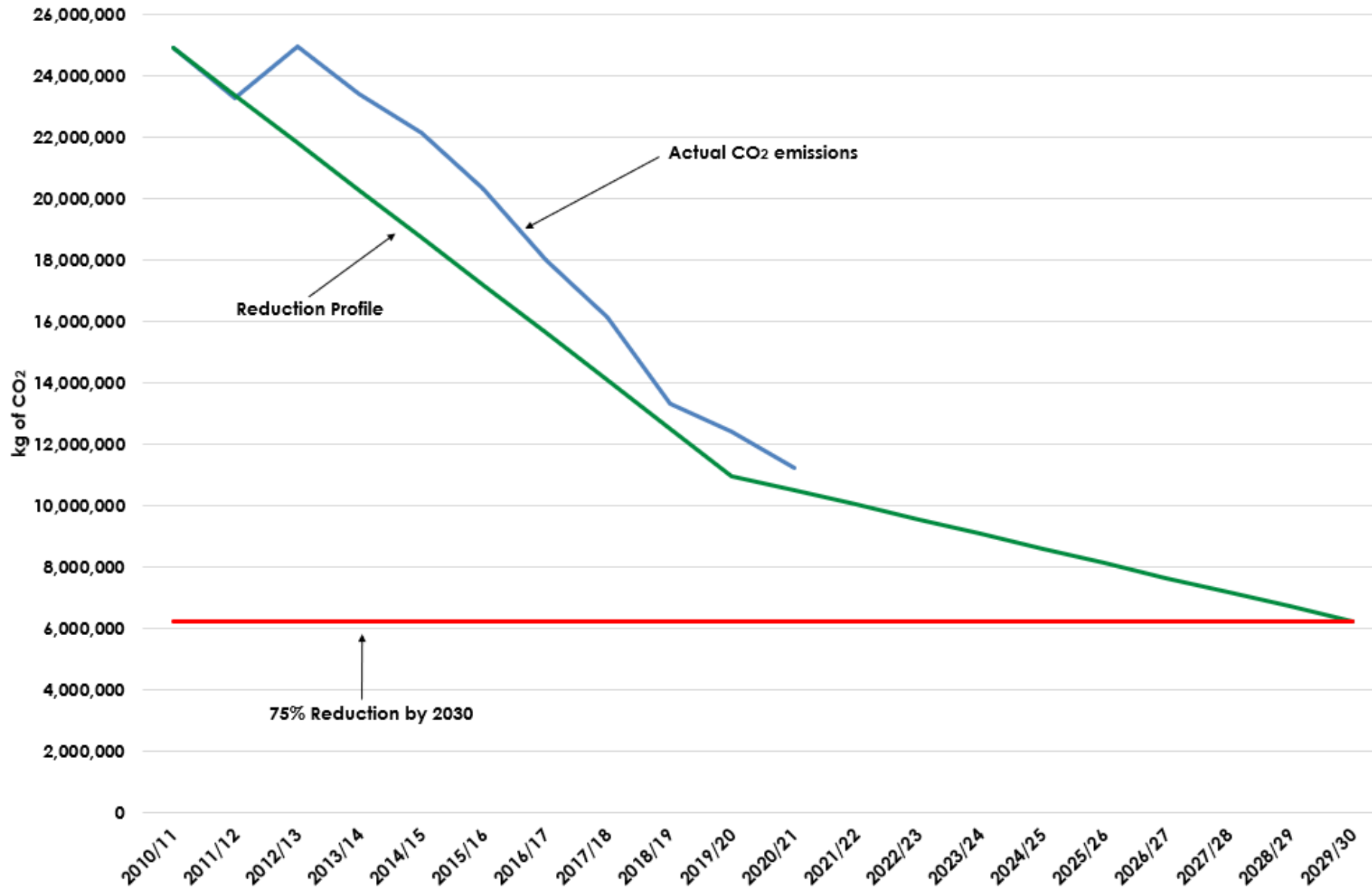
Directorate	Electricity	Gas	Oil	LPG	Biomass	Total (£)	Budget (£)	% to Budget
Centralised Energy Management	0	0	0	0	0	£47,581	£30,000	159%
SALIX - Energy Efficiency Fund	0	0	0	0	0	£112,410	£147,000	76%
People Directorate	£1,288,444	£580,348	£37,586	0	£58,984	£1,965,362	£2,314,000	85%
Angus Health & Social Care Partnership	£100,857	£43,080	0	0	£10,482	£154,419	£274,000	56%
Place Directorate	£569,553	£125,531	£3,253	£2,161	£19,332	£719,830	£1,008,000	71%
HR, Digital Enablement & Business Support	£40,452	0	0	0	0	£40,452	£48,000	84%
Legal & Democratic	0	£1,554	0	0	0	£1,554	£2,000	78%
Facilities Management	£196,377	£64,529	0	0	0	£260,906	£371,000	70%
Other Services	£3,238	-£159	0	0	0	£3,079	£3,000	103%
Sub Totals	£2,198,921	£814,883	£40,839	£2,161	£88,798	£3,305,593	£4,197,000	79%
Common Good	£5,222	£76	0	0	0	£5,298	£4,000	132%
Place Directorate - HRA	£248,032	£102,632	0	0	£7,496	£358,160	£385,000	93%
Place Directorate - Street Lighting	£451,084	0	0	0	0	£451,084	£622,000	73%
Sub Totals	£704,338	£102,708	£0	£0	£7,496	£814,542	£1,011,000	81%
Total	£2,903,259	£917,591	£40,839	£2,161	£96,294	£4,120,135	£5,208,000	79%

Notes:

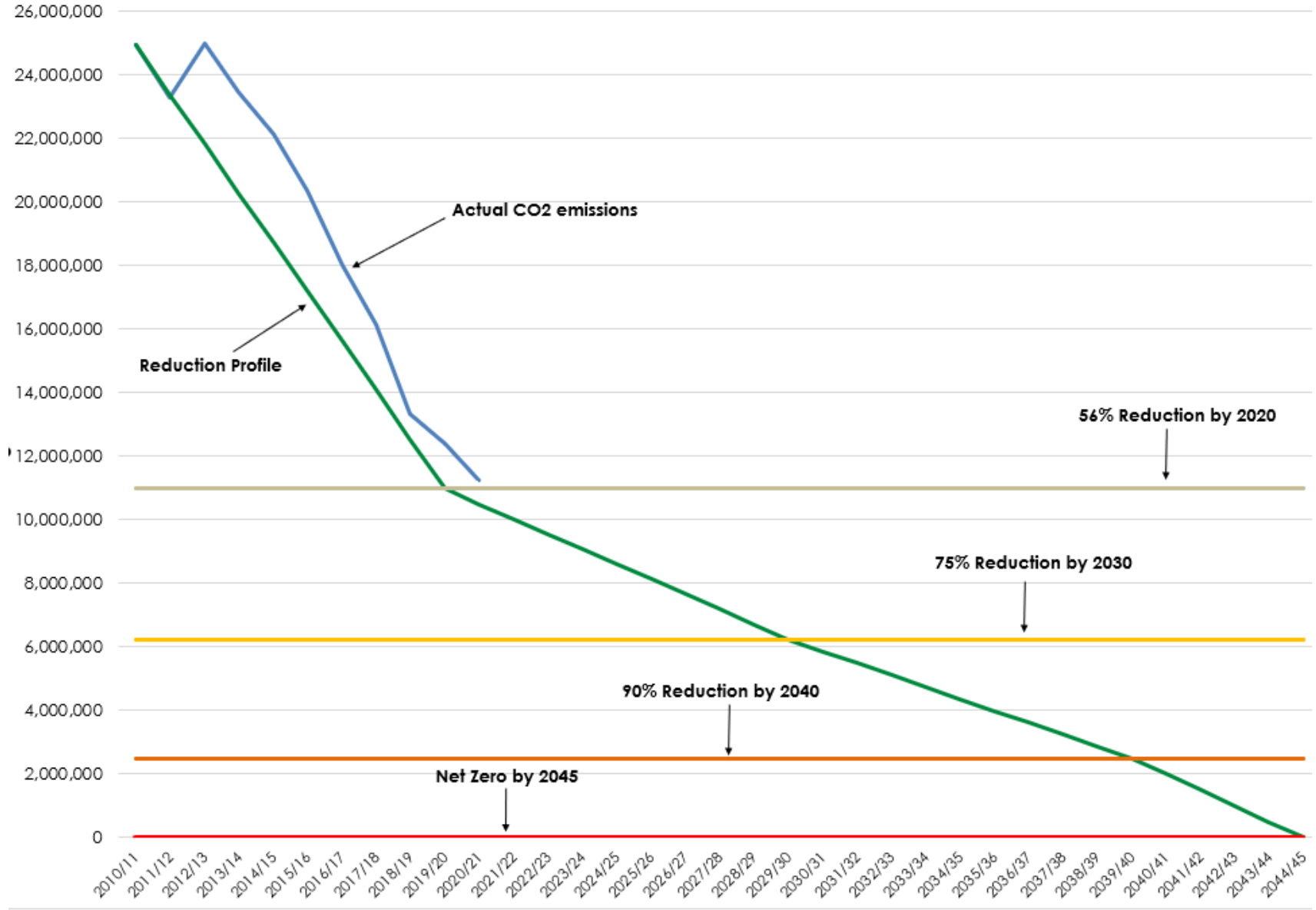
Centralised Energy Management additional expenditure on minor energy saving works.

Common Good: Overspend is due to overestimated electricity invoices at William Lamb Studio – unable to gain access to obtain actual meter reads.

Appendix 4 Overall Carbon Emissions Graph - Interim target of 75% reduction by 2030



Appendix 5 Overall Carbon Emissions Graph – ‘Net Zero’ by 2045



The impacts of Covid-19 reduced property occupation and operation across the whole Council estate, but the increased ventilation requirements, and in turn, heating requirements in buildings that have remained open during the COVID-19 pandemic have meant the reductions achieved due to the closure / low occupancy of buildings have been partially swallowed up by the increased energy requirements for ventilation and heating. It is anticipated that energy consumption will increase in 21/22 and 22/23 as Council buildings return to full operation along with the ongoing additional energy requirements for ventilation and heating in line with the Covid-19 guidance on ventilation of operational buildings. Some of the additional consumption will be partly offset by the reduction of staff in offices through the implementation of the Agile Programme.

The Climate Change (Emission Reduction Targets) (Scotland) Bill passed in September 2019 set an interim CO₂ emissions reduction target of 56% by 2020 using the 1990/1995 baseline; we have achieved a 50.2% reduction from our 2010/11 baseline. The decarbonisation of the electricity grid has significantly helped the Council reduce its CO₂ emissions; the electricity grid will continue to decarbonise, but we need to further reduce our energy consumption and decarbonise our heating fuels.

New targets based on the Scottish Governments Climate Change (Emission Reduction Targets) (Scotland) Act 2019 have been agreed. In May 2019, the Scottish Government lodged an amendment to the Climate Change Scotland Act 2009 to increase the emissions target to 'net zero' by 2045. This was on the back of the Scottish Government declaring a 'Climate Emergency' in April 2019. In September 2019 the Climate Change (Emission Reduction Targets) (Scotland) Act was passed; it amends the Climate Change (Scotland) Act 2009 target to 'net zero' CO₂ emissions by 2045 and sets interim CO₂ emissions reduction targets of 56% by 2020, 75% by 2030 and 90% by 2040 from the 1990/1995 baseline. Angus Council will adopt these targets and aim for the Councils non-domestic buildings to be 'net zero' by 2045. In order to deliver these requirements a report will be prepared identifying how the Council will assist in meeting these ambitious figures and where required to make the appropriate capital fund bids.