AGENDA ITEM No. 9

EAST RENFREWSHIRE COUNCIL

CABINET

25 January 2024

Report by Director of Environment

CARBON EMISSIONS REPORT 2022-23

PURPOSE OF REPORT

1. To provide the Cabinet with the results of the 2022/2023 carbon emissions from the Council's operations.

RECOMMENDATIONS

2. The Cabinet is recommended to note the Council's carbon emissions for 2022/23.

BACKGROUND

3. The Council is legally required to reduce carbon emissions under the Climate Change (Scotland) Act 2009. It has completed a Get to Zero Action Plan (GTZAP) which sets out how the Council will meet the target of net zero carbon emissions by 2045.

4. Monitoring and reporting are key to reaching the targets and there is a requirement under 'Climate Change (Duties of Public Bodies; Reporting Requirements) (Scotland) Order 2015' for all public bodies to report annually on their compliance with climate change duties.

5. A carbon baseline report was presented to Cabinet in January 2022 setting 2019/20 as the baseline year. The baseline year is what all future progress on reducing carbon emissions will be measured against.

6. Updated guidance has meant minor changes to the scope boundaries in 2022/23 compared with those used in the previous reports. Any changes to scope have been applied to previous years to ensure consistency and accurate comparison in this report.

REPORT

7. The report for 2022/23 followed a standard methodology that is in line with industry standards and has been adopted by other local authorities. This report relates only to the Council's operational emissions. It does not include any community emissions (e.g. domestic energy and transport from private or commercial vehicles). It does include water and energy use in buildings operated by East Renfrewshire Culture and Leisure Trust (ERCLT). The emission sources are split into three scopes; the definitions and boundaries are provided below in ***Error! Reference source not found.***.

Scope	Definition	Sources
Scope 1	All direct emissions from sources that are owned or controlled by the Council 	• The gas supply for: ○ The Council's own buildings ○ Buildings operated by East Renfrewshire Culture and Leisure Trust (ERCLT) ○ Domestic property offices ○ Sheltered housing • Fuel (diesel) use for vehicles in the Council fleet
Scope 2	Energy-related indirect emissions from generation of purchased electricity, steam and heating/cooling consumed by the Council 	• Generation of purchased electricity for: ○ The Council's own buildings ○ Buildings operated by East Renfrewshire Culture and Leisure Trust (ERCLT) ○ Domestic property – close lighting and offices ○ Sheltered housing ○ Un-metered supply (i.e. street lighting, traffic signals, CCTV, bollards etc.) ○ Electric vehicles
Scope 3	All other indirect emissions that are a consequence of the activities of the Council 	• Council business travel • Council water supply and treatment • Waste disposal and processing ▪ Landfill ▪ Recycling ▪ Incineration ▪ Composting • Supply chain emissions (e.g. purchased goods/services)

Figure 1 East Renfrewshire Council's emissions accounting boundary

Results

8. The total estimated emissions, including supply-chain emissions, for 2022/23 was 53,701 tCO_2e. In the previous year (2021/22) it was 54,884 tCO_2e which equates to a 2% reduction.

9. A target to achieve net zero carbon emissions by 2045 was agreed by Cabinet in November 2022. This target does not include supply-chain emissions because there are concerns about the data calculation methodology not being sophisticated enough to monitor progress. For the time-being, supply-chain emissions will be flat-lined from the baseline year, meaning we will not report any progress on this until the data calculation methodology is improved. However, it is estimated that supply-chain emissions are 40,278 tCO_2e, suggesting it is around 75% of the Council's total emissions in 2022/23.

10. The total emissions, excluding supply-chain emissions, is therefore the basis of reporting progress in the sections below.

11. The total estimated emissions, excluding supply-chain emissions for 2022/23 was 13,423 tCO_2e. This is a 1,183 tCO_2e (8%) reduction from last year, and 7,641 tCO_2e (36%) reduction from the baseline (2019/20).

12. The top sources of Council emissions for 2022/23 are as follows:

- Gas supply in Council Buildings (39%)
- Electricity supply in Council Buildings (18%)
- Gas supply in buildings operated by ERCLT (14%)

13. A breakdown of the emissions, excluding supply-chain emissions, is shown in **Error! Reference source not found.**. The full Council emissions for the baseline year (2019/20), previous year (2021/22) and 2022/23 can be found in Appendix A: Table 1.

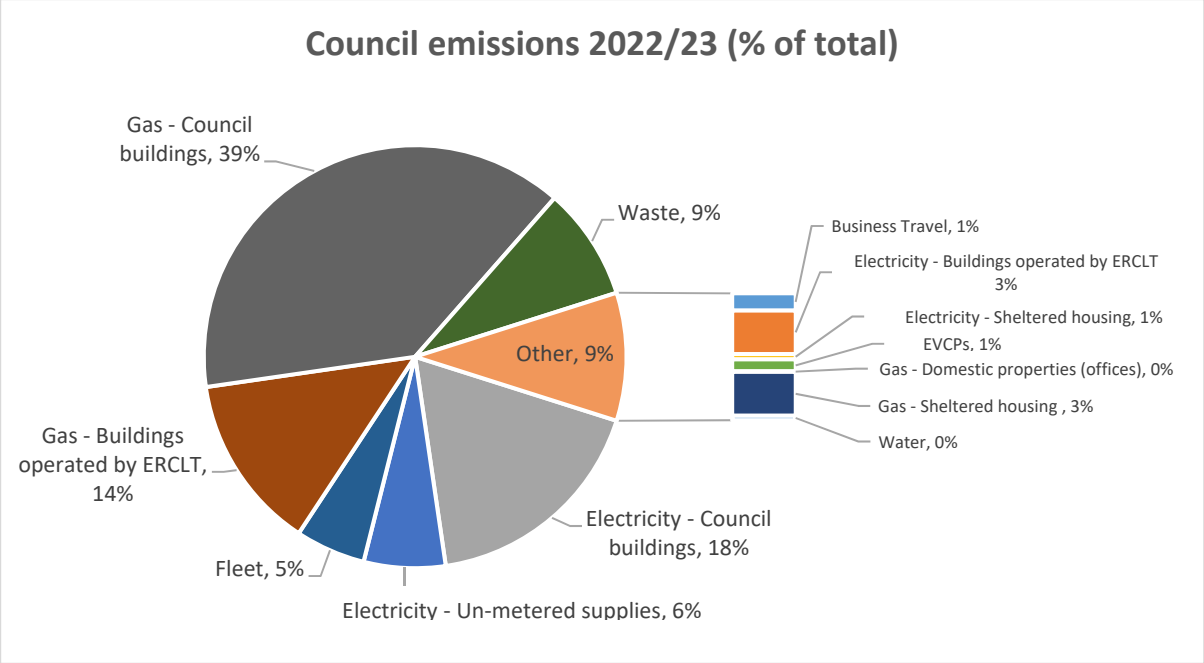

Figure 2 East Renfrewshire Council emissions 2022/23 as percentage (%) of total emissions.

Analysis

14. Analysis has been undertaken to compare to the previous year (2021/22) and the baseline year (2019/20). An indication of progress towards the agreed target of net zero carbon emissions by 2045 is also provided in the following section. All the analysis provided is excluding supply-chain emissions.

15. The following trends are noted in the ***last 12 months***:

a. There has been an 8% (~1,183tCO_2e) reduction in total emissions.
b. Emissions from gas have reduced by 11%. This is due to the milder winter and warmer summer experienced in 2022/23, reducing the need for heating. In order to significantly reduce gas emissions, gas boilers will need to be removed from buildings.
c. Electricity emissions reduced by 12%, this is mainly a result of the decarbonisation of the national grid, and East Renfrewshire Council's consumption dropped by 4%. Decarbonisation of the national grid is happening as more power is generated from wind, solar and hydro, as well as electricity transmission efficiencies.
d. The water supply and treatment processes are also decarbonising. This has resulted in a 6% reduction in water emissions, despite an 11% increase in East Renfrewshire Council's water consumption.
e. Business travel emissions have increased by 21%. This increase is a result of the return to normal business travel following the impacts of Covid-19 in 2020/21.
f. There has been no change to the emissions from fleet vehicles.

16. The following trends are noted ***against the baseline*** (i.e. 2022/23 versus 2019/20):

a. There has been a 36% (~7,641tCO_2e) reduction in total emissions.
b. This is mainly due to the Clyde Valley Waste partnership which diverts waste from landfill. This has reduced waste emissions by 83% since baseline.
c. Now that the waste contract is established, we will not see any further emissions savings. Excluding waste emissions, the Council's emissions have only reduced by 14%.

d. Gas emissions have reduced by 9%. This reduction is a result of the milder winter in 2022/23. There is no guarantee this reduction would be realised this winter if the weather is colder for a sustained period.
e. Emissions from electricity have reduced by 22% in this period. This is mainly due to the decarbonisation of the national electricity grid and the continued replacement of LED street-lighting. The investment in LED lighting has resulted in a 33% reduction in consumption from this source.
f. Business travel has increased, resulting in a 7% increase in related emissions. This is a result of an increased number of short-haul flights taken and car miles.
g. There has been a 70% reduction in water emissions. The emissions saving has been achieved by the decarbonisation of the water supply and treatment processes. Water consumption has risen by 10% in the same period.

Forecast

17. The Council has set a target of achieving net zero emissions by 2045. This means that emissions are reduced as far as practicable, and then any 'residual emissions' are managed by offsetting schemes, which most commonly involve tree planting.

18. Emissions need to reduce by an estimated 850 tCO_2e every year until 2045. Excluding waste management emissions, which are likely to remain quite stable as a result of the long-term contract, emissions have reduced by c. 506 tCO_2e per year since 2019/20. At present, it is assessed that East Renfrewshire Council will not reach the target by 2045 unless more measures to avoid, reduce and or mitigate carbon emissions can be progressed. Although emissions from electricity and water are expected to continue a downward trend in the coming years as the national grid and water infrastructure supplying the Council becomes more carbon neutral, there are not enough measures currently in place that will reduce emissions to net zero by 2045. East Renfrewshire Council is not alone in this respect with most local authorities acknowledging this challenge via representation through COSLA to the Scottish Government. To achieve this goal the Council will require to progress significant action and investment as soon as possible.

19. The GTZAP sets out the major steps needed to achieve net zero by 2045. These include transitioning away from diesel vehicles and gas boilers in Council properties, as well as improving the energy efficiency in buildings through new investment.

Climate Change Mitigation Project updates

20. The Council has implemented a tree planting programme and planted 11,000 trees since 2021/22, with a further 10,000 trees between December 2023 and March 2024. Tree planting helps to mitigate the effects of climate change by providing shade, reducing the risk of soil erosion, and by acting as flood defences. As part of their natural growth cycle trees also capture CO2 from the atmosphere which can help to offset a small amount of the emissions produced by human activity.

21. In October 2023 the Council completed the Levern Water Restoration Project. This project has widened and added natural curves to a section of the Levern Water which had been straightened at the time of industrialisation. These changes will encourage more fish and provide a natural flood defence to Barrhead Town centre. An improved path network and greenspace has also been created which will enhance biodiversity by attracting insects and birds, as well as providing a space for residents to enjoy.

FINANCE AND EFFICIENCY

22. There are no direct finance or staff costs related to this report.

CONSULTATION AND PARTNERSHIP WORKING

23. The report is extracted from the formal submission to Sustainable Scotland Network, which is required as part of the Council's legal duties. Internal Audit provided verification of the formal submission.

24. The report required input from all departments and data was provided by Inspire Energy, who provide energy data services to the Council.

25. The Council's total emissions, excluding supply-chain emissions, are historically in line with similar sized local authorities. However, reporting scopes vary considerably across councils and therefore direct comparison is difficult. 2022/23 data is not yet available and thus no comment can be made on comparable performance.

IMPLICATIONS OF THE REPORT

26. There are no legal, HR, IT, equality or H&S impacts from this report.

CONCLUSIONS

27. The Council's total estimated emissions, excluding supply-chain emissions, for 2022/2023 is 13,423 tCO2e.

28. This is a reduction of 36% compared with the baseline year (2019/20) and 8% against the previous year (2021/22). Most of the emission savings are a result of the Clyde Valley Waste Partnership, and from the decarbonisation of the electricity grid and water supply /treatment processes. Natural gas consumption was reduced by 11% because of a milder winter and warmer summer reducing the need for heating buildings.

29. There has been little lasting change to the consumption of electricity and gas. If the Council continues its current trajectory, it is not forecast to achieve the 2045 target for net zero carbon emissions. The target will only be achieved if significant action is taken to reduce operational emissions. The Get to Zero Action Plan sets out the measures that East Renfrewshire Council will need to take to achieve net zero.

RECOMMENDATIONS

30. The Cabinet is asked to note the Council's carbon emissions for 2022/23.

Director of Environment

For further information contact: Phil Daws, Head of Housing, Property & Climate Services
phil.daws@eastrenfrewshire.gov.uk

Convener contact details

Councillor Owen O'Donnell (Leader of the Council)
Office: 0141 577 3107
Mobile: 07435 735692

January 2024

Appendix A

East Renfrewshire Council emissions 2022/23

Scope	Sub-category	Source	Baseline (2019/20) consumption	Previous year (2021/22) consumption	Current year (2022/23) consumption	% change in consumption baseline to current year	% change in consumption previous year to current year	Baseline (2019/20) emissions (tCO2e)	Previous year (2021/22) emissions (tCO2e)	Current year (2022/23) emissions (tCO2e)	% change in emissions baseline to current year	% change in emissions previous year to current year
Scope 1	Natural gas	Council buildings	33,231,696 kWh	32,548,425 kWh	28,447,880 kWh	▼ -14.4%	▼ -12.6%	6,110	5,962	5,193	▼ -15.0%	▼ -12.9%
		Buildings operated by ERCLT	8,612,105 kWh	10,584,899 kWh	9,868,936 kWh	▲ 14.6%	▼ -6.8%	1,584	1,939	1,801	▲ 13.8%	▼ -7.1%
		Sheltered housing	2,750,692 kWh	2,662,555 kWh	2,485,903 kWh	▼ -9.6%	▼ -6.6%	506	488	454	▼ -10.3%	▼ -7.0%
		Domestic properties (offices)	22,252 kWh	29,526 kWh	28,247 kWh	▲ 26.9%	▼ -4.3%	4	5	5	▲ 26.0%	▼ -4.7%
		Sub-total	44,616,745 kWh	45,825,405 kWh	40,830,966 kWh	▼ -8.5%	▼ -10.9%	8,204	8,393	7,453	▼ -9.1%	▼ -11.2%
	Fleet	Fleet Vehicles - Diesel	247,479 litres	237,820 litres	280,247 litres	▲ 13.2%	▲ 17.8%	630	597	717	▲ 13.8%	▲ 20.0%
		Fleet Vehicles - Red Diesel	69,183 litres	41,636 litres	n/a litres	n/a	n/a	191	115	0	n/a	n/a
		Sub-total	316,662 litres	279,455 litres	280,247 litres	▼ -11.5%	▲ 0.3%	821	712	717	▼ -12.7%	▲ 0.6%
Scope 2	Electricity	Council buildings	11,705,886 kWh	11,793,265 kWh	11,286,181 kWh	▼ -3.6%	▼ -4.3%	2,964	2,726	2,382	▼ -19.6%	▼ -12.6%
		Un-metered supplies	4,907,756 kWh	4,537,574 kWh	3,963,494 kWh	▼ -19.2%	▼ -12.7%	1,243	1,049	837	▼ -32.7%	▼ -20.2%
		Buildings operated by ERCLT	2,264,046 kWh	2,035,356 kWh	2,136,240 kWh	▼ -5.6%	▲ 5.0%	573	470	451	▼ -21.3%	▼ -4.1%
		Sheltered housing	416,613 kWh	264,417 kWh	259,816 kWh	▼ -37.6%	▼ -1.7%	105	61	55	▼ -48.0%	▼ -10.3%
		EVCPs	142,405 kWh	334,148 kWh	584,072 kWh	▲ 310.1%	▲ 74.8%	36	77	123	▲ 241.9%	▲ 59.6%
		Domestic properties (close lighting & offices)	110,054 kWh	116,878 kWh	115,909 kWh	▲ 5.3%	▼ -0.8%	28	27	24	▼ -12.2%	▼ -9.4%
		Sub-total	19,546,760 kWh	19,081,639 kWh	18,345,713 kWh	▼ -6.1%	▼ -3.9%	4,949	4,410	3,872	▼ -21.8%	▼ -12.2%
Scope 3	Waste	Landfill	13,991 tonnes	461 tonnes	470 tonnes	▼ -96.6%	▲ 2.0%	6,119	215	210	▼ -96.6%	▼ -2.6%
		Aggregate to Landfill	570 tonnes	524 tonnes	2,791 tonnes	▲ 389.6%	▲ 432.6%	1	1	3	▲ 377.8%	▲ 430.2%
		Recycling	20,343 tonnes	12,328 tonnes	13,163 tonnes	▼ -35.3%	▲ 6.8%	353	237	256	▼ -27.6%	▲ 8.0%
		Composting	12,606 tonnes	11,245 tonnes	10,030 tonnes	▼ -20.4%	▼ -10.8%	129	101	89	▼ -30.5%	▼ -11.2%
		Incineration/combustion	748 tonnes	16,015 tonnes	14,466 tonnes	▲ 1834.0%	▼ -9.7%	16	341	308	▲ 1830.6%	▼ -9.7%
		Other	355 tonnes	0 tonnes	502 tonnes	▲ 41.4%	n/a	155	0	291	▲ 87.2%	n/a
		Sub-total	48,613 tonnes	40,573 tonnes	41,422 tonnes	▼ -14.8%	▲ 2.1%	6,773	894	1,157	▼ -82.9%	▲ 29.3%
	Water	Council buildings	120,707 m3	125,945 m3	138,371 m3	▲ 14.6%	▲ 9.9%	123	41	39	▼ -68.4%	▼ -6.2%
		Buildings operated by ERCLT	28,426 m3	22,450 m3	25,713 m3	▼ -9.5%	▲ 14.5%	29	7	7	▼ -75.0%	▼ -2.2%
		Domestic properties (offices)	78 m3	80 m3	112 m3	▲ 43.6%	▲ 40.2%	0	0	0	▼ -60.4%	▲ 19.7%
		Sub-total	149,211 m3	148,475 m3	164,196 m3	▲ 10.0%	▲ 10.6%	152	49	46	▼ -69.6%	▼ -5.6%
	Other	Business travel (car)	899,772 km	742,712 km	974,283 km	▲ 8.3%	▲ 31.2%	154	127	166	▲ 7.8%	▲ 30.6%
		Business Travel (Rail)	44,249 km	20,602 km	31,923 km	▼ -27.9%	▲ 55.0%	2	1	1	▼ -30.7%	▲ 55.0%
		Business Travel (Domestic Flight)	37,839 km	15,102 km	16,496 km	▼ -56.4%	▲ 9.2%	9	4	4	▼ -56.1%	▲ 9.2%
		Business Travel (Short-haul flights)	8,266 km	98,102 km	40,420 km	▲ 389.0%	▼ -58.8%	1	15	6	▲ 383.4%	▼ -58.8%
		Sub-total	990,126 km	876,518 km	1,063,122 km	▲ 7.4%	▲ 21.3%	166	147	178	▲ 6.8%	▲ 21.0%
	Procurement	Supply chain emissions	n/a	n/a	n/a	n/a	n/a	40,278	40,278	40,278	▲ 0.0%	▲ 0.0%
		Sub-total	n/a	n/a	n/a	n/a	n/a	40,278	40,278	40,278	▲ 0.0%	▲ 0.0%
					Total (tCO2e)			**61,343**	**54,884**	**53,701**	**▼ -12.5%**	**▼ -2.2%**
					Total w/o suppy chain emissions (tCO2e)			**21,065**	**14,606**	**13,423**	**▼ -36.3%**	**▼ -8.1%**