

EAST RENFREWSHIRE COUNCILCABINET26 January 2023Report by Director of EnvironmentCARBON EMISSIONS REPORT 2021-22**PURPOSE OF REPORT**

1. To provide the Cabinet with the results of the 2021/2022 carbon emissions from the Council's operations.

RECOMMENDATIONS

2. The Cabinet is recommended to note the Council's carbon emissions for 2021/22.

BACKGROUND

3. The Council is legally required to reduce carbon emissions under the Climate Change (Scotland) Act 2009. It has committed to completing a Get to Zero plan, currently underway, which will set out how the Council will meet the target of net zero carbon emissions by 2045.


4. Monitoring and reporting is 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 2021/22 compared with those used in the January report. Any changes to scope was subsequently applied to previous years to ensure consistency and accurate comparison.

REPORT

7. The report for 2021/22 followed a standard methodology that is in line with other local authorities and industry standards. This report relates only to the Council's operational emissions. It doesn't include any community emissions (e.g. domestic energy and transport). 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 *Figure 1*.

Scope	Definition	Sources
Scope 1	All direct emissions from sources that are owned or controlled by the Council 	<ul style="list-style-type: none"> • The gas supply and water supply and treatment for: <ul style="list-style-type: none"> ○ The council's own buildings ○ Buildings operated by East Renfrewshire Culture and Leisure Trust (ERCLT) ○ Domestic property offices ○ Sheltered housing • Petrol and diesel vehicles in the council fleet



Scope	Definition	Sources
Scope 2	Energy-related indirect emissions from generation of purchased electricity, steam and heating/cooling consumed by the Council 	<ul style="list-style-type: none"> • Generation of purchased electricity for: <ul style="list-style-type: none"> ○ 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 	<ul style="list-style-type: none"> • Council business travel • Waste disposal and processing <ul style="list-style-type: none"> ▪ 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 2021/22 was 55,856tCO₂e. In the previous year (2020/21) it was 57,524tCO₂e.

9. A target to achieve net zero carbon emissions by 2045 was agreed by Cabinet in November 2022. This target did 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. It is estimated that supply-chain emissions are 40,278 tCO₂e, suggesting it is around 72% of the Council's total emissions in 2021/22.

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 2021/22 was 15,578 tCO₂e. This is a 1,668 tCO₂e (10%) reduction from last year, and 6,168 tCO₂e (28%) reduction from the baseline (2019/20).

12. The top sources of Council emissions for 2021/22 are as follows:

- Natural gas supply in Council buildings (38%)
- Electricity use in Council buildings (17%)
- Natural gas supply in buildings operated by ERCLT (12%)

13. This is a significant change to 2019/20 where waste management was the second largest emission source. Waste management emissions have reduced by 84% since baseline (2019/20) as a result of the Clyde Valley Waste Partnership which diverts waste from landfill.

14. A breakdown of the emissions, excluding supply-chain emissions, is shown in Figure 2. The full Council emissions for the baseline year (2019/20), previous year (2020/21) and 2021/22 can be found in Appendix A: Table 1.

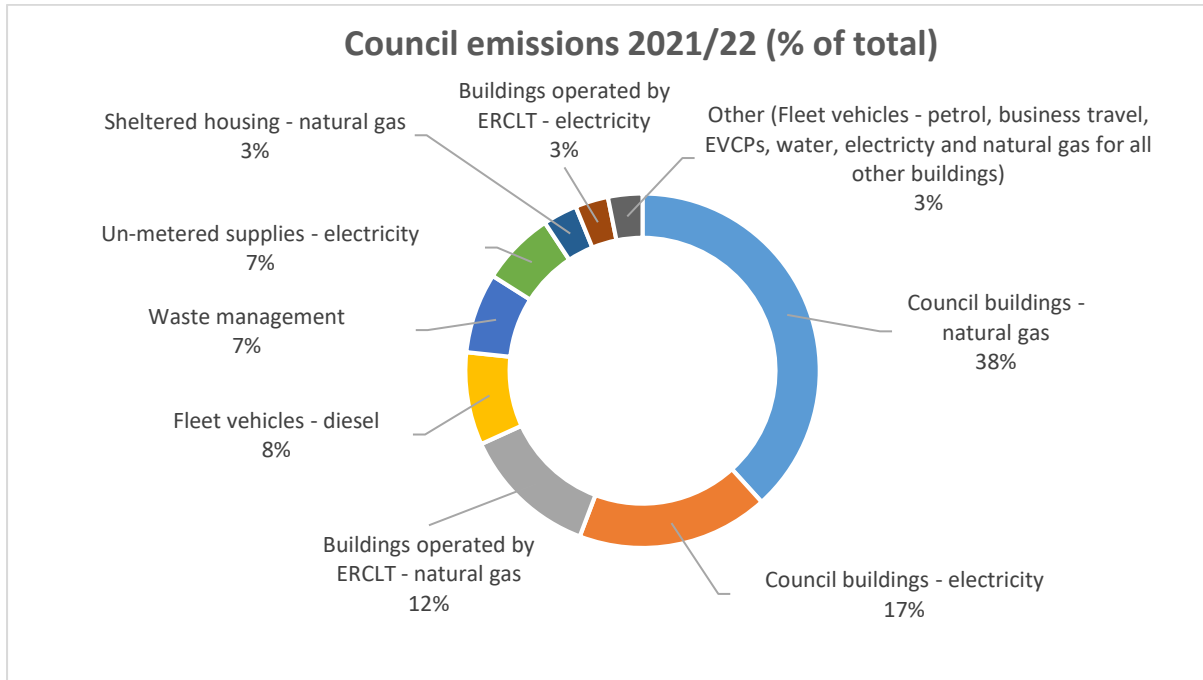


Figure 2 East Renfrewshire Council emissions 2021/22 as percentage (%) of total emissions.

Analysis

15. Analysis has been undertaken to show comparisons to the previous year (2020/21) 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.

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

- a. There has been a 10% (~1,668 tCO₂e) reduction in total emissions.
- b. This is almost entirely a direct result of the Clyde Valley Waste Partnership contract, which sends waste for energy recovery instead of landfill.
- c. Excluding waste management, emissions are estimated at 14,440 tCO₂e which is a 1% increase. This is due to the rise in emissions from electricity use, fleet vehicles, business travel, and water, highlighting the need for emissions reduction projects in these areas.
- d. There has been little change in the emissions from gas in buildings. Without removing gas boilers in buildings, this will remain at current levels.
- e. Emissions from electricity have increased by 2%. This is despite a reduction in the carbon intensity of the national grid of 9%. Decarbonisation of the national grid is happening as more power is generated from wind, solar and hydro, as well as electricity transmission efficiencies.
- f. Emissions from electricity have increased primarily due to the increased use of Electric vehicle charging points (EVCPs) and in buildings operated by ERCLT.
- g. Emissions from water have increased by 40% and business travel by 41%. These increases are a result of the rebound effect in operations following the impacts of Covid-19 in 2020/21.

17. The impacts of Covid-19 must be considered when noting the emissions for this year, and the previous (2020/21). Changes to energy use, particularly water use, and travel, as a result of changed working behaviours, were significant. These reductions have continued, albeit at a smaller scale, post-covid.

18. The following trends are noted **against the baseline** (i.e. 2021/22 versus 2019/20):
- a. There has been a 28% (~6,168 tCO₂e) reduction in total emissions.
 - b. This is a result of the reduction in emissions from waste, which has reduced by 84% as a result of the Clyde Valley Waste Partnership. Further savings are not expected to be repeated in future years now that the contract is established.
 - c. Excluding waste management, Council emissions have only reduced by 2% (~150tCO₂e).
 - d. There has been a 2% increase in emissions from gas.
 - e. Fleet (petrol and diesel) vehicle emissions have increased by 15%. This is mainly as a result of the additional vehicles required to comply with Covid-19 social distancing.
 - f. Whilst electricity consumption has increased by 2%, emissions from electricity have reduced by 11% in the period. This is due to the decarbonisation of the national electricity grid, rather than any action by the Council.
 - g. Although electricity consumption has increased, the replacement of LED street-lighting resulted in a 16% reduction in emissions from this source. The programme is likely to continue reducing electricity consumption.
 - h. The miles expensed for business travel by car have decreased, resulting in a 17% reduction in related emissions. This is likely due to the changes in working behaviours (i.e. remote working) reducing the requirement for travel.
 - i. There has been a 0.5% reduction in water consumption, equating to a 68% reduction in emissions. The emissions saving has been achieved by the decarbonisation of the water supply and treatment processes, rather than any action by the Council.
19. Most progress since 2019/20 has been made with the Clyde Valley Waste partnership and with the LED street lighting replacement programme.

Forecast

20. 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 paying someone to offset these, which typically involves planting trees. In order to meet the 2045 target, the Council needs to reduce its operational emissions from 21,746 tCO₂e to 0 tCO₂e.
21. This suggests a reduction of 870 tCO₂e is needed in each of the 25 years until the target. Excluding waste management emissions, which are likely to remain quite stable as a result of the long-term contract, emissions have only reduced by c. 150 tCO₂e since 2019/20. This suggests the Council will miss its targets without taking additional action. These additional actions will be proposed in the forthcoming GTZAP.
22. There has been little to no positive change in Council emissions from natural gas, electricity or fleet vehicles. Only removing gas boilers from buildings will reduce gas consumption, which requires a major investment in properties. Investment is required not just in the heat source but also in the fabric of the building.
23. 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.

24. The forthcoming GTZAP will set out the major actions needed to reduce emissions. Actions to remove gas boilers, improve energy efficiency in buildings, and transition away from diesel vehicles will be vital to reducing emissions to meet the net zero targets. Given the number of live projects currently underway it is not anticipated that emissions will reduce much in the next couple of years.

FINANCE AND EFFICIENCY

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

CONSULTATION AND PARTNERSHIP WORKING

26. 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.

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

28. 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. 2021/22 data is not yet available and thus no comment can be made on comparable performance.

IMPLICATIONS OF THE REPORT

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

CONCLUSIONS

30. The Council's total estimated emissions, excluding supply-chain emissions, for 2021/2022 is 15,578 tCO₂e.

31. This is a reduction of 28% compared with the baseline year (2019/20) and 10% against the previous year (2020/21). Most of the emission savings are a result of the Clyde Valley Waste Partnership which has diverted waste from landfill. Further reductions from this contract are not expected now that it is established and these gains have been achieved.

32. There has been little change to the emissions produced from other major sources, such as natural gas supply and electricity use. If the Council continues on its current trajectory of reductions of c. 150 tCO₂e per year, it will not meet the 2045 target for net zero carbon emissions, which requires reductions of c. 870 tCO₂e.

RECOMMENDATIONS

33. The Cabinet is asked to note the Council's carbon emissions for 2021/22.

Director of Environment

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January 2023

Appendix A

Table 1: East Renfrewshire Council emissions (tCO2e)												
Scope	Sub-category	Source	Baseline (2019/20) consumption	Previous year (2020/21) consumption	Current year (2021/22) consumption	% change in consumption baseline to current year	% change in consumption previous year to current year	Baseline (2019/20) emissions (tCO2e)	Previous year (2020/21) emissions (tCO2e)	Current year (2021/22) 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	35,568,167 kWh	32,548,425.23 kWh	▼ -2.1%	▼ -8.5%	6,110.3	6,539.9	5,961.6	▼ -2.4%	▼ -8.8%
		Buildings operated by ERCLT*	8,612,105 kWh	7,929,771 kWh	10,584,898.85 kWh	▲ 22.9%	▲ 33.5%	1,583.5	1,458.0	1,938.7	▲ 22.4%	▲ 33.0%
		Sheltered housing	2,750,692 kWh	2,740,696 kWh	2,662,554.83 kWh	▼ -3.2%	▼ -2.9%	505.8	503.9	487.7	▼ -3.6%	▼ -3.2%
		Domestic properties (offices)	22,252 kWh	30,932 kWh	29,525.60 kWh	▲ 32.7%	▼ -4.5%	4.1	5.7	5.4	▲ 32.2%	▼ -4.9%
		Sub-total	44,616,745 kWh	46,269,566 kWh	45,825,405 kWh	▲ 2.7%	▼ -1.0%	8,203.7	8,507.6	8,393.4	▲ 2.3%	▼ -1.3%
	Water	Council buildings	120,707 m3	89,590 m3	125,945 m3	▲ 4.3%	▲ 40.6%	122.7	29.4	41.4	▼ -66.3%	▲ 40.6%
		Buildings operated by ERCLT	28,426 m3	16,109 m3	22,450 m3	▼ -21.0%	▲ 39.4%	28.9	5.3	7.4	▼ -74.5%	▲ 39.4%
		Domestic properties (offices)	78 m3	121 m3	80 m3	▲ 2.4%	▼ -34.0%	0.1	0.0	0.0	▼ -66.9%	▼ -34.0%
		Sub-total	149,211 m3	105,820 m3	148,475 m3	▼ -0.5%	▲ 40.3%	151.7	34.8	48.8	▼ -67.8%	▲ 40.3%
	Other	Fleet Vehicles - Diesel	438,236 litres	466,800 litres	524,740 litres	▲ 19.7%	▲ 12.4%	1,115.8	1,188.5	1,318.3	▲ 18.2%	▲ 10.9%
Fleet Vehicles - Petrol		69,183 litres	63,204 litres	64,749 litres	▼ -6.4%	▲ 2.4%	150.0	137.0	142.0	▼ -5.3%	▲ 3.6%	
Sub-total		507,419 litres	530,004 litres	589,489 litres	▲ 16.2%	▲ 11.2%	1,265.8	1,325.5	1,460.3	▲ 15.4%	▲ 10.2%	
Scope 2	Electricity	Council buildings	11,705,886 kWh	10,194,950 kWh	11,793,265 kWh	▲ 0.7%	▲ 15.7%	2,963.8	2,581.3	2,725.7	▼ -8.0%	▲ 5.6%
		Un-metered supplies	4,907,756 kWh	4,690,952 kWh	4,537,574 kWh	▼ -7.5%	▼ -3.3%	1,242.6	1,187.7	1,048.7	▼ -15.6%	▼ -11.7%
		Buildings operated by ERCLT	2,264,046 kWh	1,542,960 kWh	2,035,356 kWh	▼ -10.1%	▲ 31.9%	573.2	390.7	470.4	▼ -17.9%	▲ 20.4%
		Sheltered housing	416,613 kWh	344,122 kWh	264,417 kWh	▼ -36.5%	▼ -23.2%	105.5	87.1	61.1	▼ -42.1%	▼ -29.9%
		EVCPs	142,405 kWh	221,916 kWh	334,148 kWh	▲ 134.6%	▲ 50.6%	36.1	56.2	77.2	▲ 114.2%	▲ 37.4%
		Domestic properties (close lighting & offices)	110,054 kWh	113,838 kWh	116,878 kWh	▲ 6.2%	▲ 2.7%	27.9	28.8	27.0	▼ -3.1%	▼ -6.3%
		Sub-total	19,546,760 kWh	17,108,738 kWh	19,081,639 kWh	▼ -2.4%	▲ 11.5%	4,949.0	4,331.8	4,410.1	▼ -10.9%	▲ 1.8%
Scope 3	Waste	Landfill	14,561 tonnes	4,878 tonnes	985 tonnes	▼ -93.2%	▼ -79.8%	6,368.6	2,133.5	460.0	▼ -92.8%	▼ -78.4%
		Recycling	20,343 tonnes	15,515 tonnes	12,328 tonnes	▼ -39.4%	▼ -20.5%	353.1	277.5	236.6	▼ -33.0%	▼ -14.7%
		Composting	12,606 tonnes	9,583 tonnes	11,245 tonnes	▼ -10.8%	▲ 17.3%	128.6	97.8	100.7	▼ -21.8%	▲ 2.9%
		Incineration/combustion	748 tonnes	14,046 tonnes	16,015 tonnes	▲ 2041.0%	▲ 14.0%	15.9	299.4	341.0	▲ 2038.7%	▲ 13.9%
		Other	355 tonnes	338 tonnes	0 tonnes	▼ -100.0%	▼ -100.0%	155.3	147.8	0.0	▼ -100.0%	▼ -100.0%
		Sub-total	48,613 tonnes	44,360 tonnes	40,573 tonnes	▼ -16.5%	▼ -8.5%	7,021.5	2,956.1	1,138.3	▼ -83.8%	▼ -61.5%
	Other	Business travel (car)	899,772 km	527,295 km	742,712 km	▼ -17.5%	▲ 40.9%	154.2	90.4	127.4	▼ -17.4%	▲ 40.9%
		Sub-total	899,772 km	527,295 km	742,712 km	▼ -17.5%	▲ 40.9%	154.2	90.4	127.4	▼ -17.4%	▲ 40.9%
	Procurement	Supply chain emissions	n/a	n/a	n/a	n/a	n/a	40,278	40,278	40,278	n/a	n/a
Sub-total		n/a	n/a	n/a	n/a	n/a	40,278.0	40,278.0	40,278.0	n/a	n/a	
Total (tCO2e)								62,023.9	57,524.1	55,856.4	▼ -9.9%	▼ -2.9%
Total w/o supply chain emissions (tCO2e)								21,745.9	17,246.1	15,578.4	▼ -28.4%	▼ -9.7%

*East Renfrewshire Culture and Leisure Trust (ERCLT)

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