



RHONDDA CYNON TAF COUNTY BOROUGH COUNCIL

**REPORT FOR THE ENERGY EFFICIENCY & DECARBONISATION
CABINET SUB-COMMITTEE**

19 NOVEMBER 2025

**WELSH PUBLIC SECTOR NET ZERO CARBON REPORT
FOR F/Y 2024/25**

**REPORT FOR THE DEPUTY CHIEF EXECUTIVE & GROUP
DIRECTOR, CORPORATE SERVICES, in discussion with the
CABINET MEMBER for CORPORATE RESOURCES, Cllr. Ros Davis.**

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1. PURPOSE OF THE REPORT

- 1.1 The purpose of this paper is to provide an update to the Energy Efficiency & Decarbonisation Cabinet Sub-Committee with regards to the Welsh Public Sector Net Zero Carbon Reporting Scheme and Rhondda Cynon Taf Council's submission under that regime for the Financial Year (FY) 2024/25.

2. RECOMMENDATIONS

It is recommended that the Members:

- 2.1 Note the contents of this report as part of the ongoing work under the remit of the Energy Efficiency & Decarbonisation Cabinet Sub Committee.
- 2.2 Agree to publish the data on the Council's Carbon Footprint Dashboard.
- 2.3 Receive further reports providing further updates on progress as and when deemed appropriate.

3. REASONS FOR RECOMMENDATIONS

- 3.1 This report provides background information and an update on the current situation regarding the carbon footprint of Rhondda Cynon Taf Council and its related activities, whilst noting ongoing developments in the Welsh Public Sector Net Zero (WPSNZ) reporting process.

4. **BACKGROUND**

- 4.1 In 2017, the Welsh Government set the ambition of achieving a carbon neutral public sector by 2030. Subsequently in March 2019, the Welsh Government published 'Prosperity for All: A Low Carbon Wales' which includes *Policy 20: Support the public sector to baseline, monitor and report progress towards carbon neutrality*. This supports Rhondda Cynon Taff Council's own commitment to becoming a Carbon-Neutral Authority by 2030.
- 4.2 In May 2021, the Welsh Government introduced the Welsh Public Sector Net Zero (WPSNZ) reporting scheme. This scheme encompasses over 60 public sector organisations including all Welsh Unitary Authorities, Health Boards and Trusts, National Park Authorities, Welsh Universities, Fire and Rescue Authorities and various other public sector bodies.
- 4.3 The Council's carbon emissions data has been reported in line with the WPSNZ reporting scheme since the baseline year of FY 2019/20.
- 4.4 This reporting process, alongside the adoption of the Council's Decarbonisation Strategy and Action Plan (2023-2025), provides a clear path with defined timescales to achieving the Council's own 'Carbon-neutral' reduction targets. The Corporate Decarbonisation Strategy and Action Plan is due to be reviewed and updated looking forward to 2030.
- 4.5 The WPSNZ reporting scheme utilises the widely used Green House Gas (GHG) protocol and accepted methodology for calculating GHG emissions. The Protocol categorises emissions into three categories, namely, Scope 1, 2 and 3 which are defined in Figure 1 below.

Scope 1	Direct emissions of an organisation, including combustion of fuels and fugitive emissions
Scope 2	Indirect emissions of an organisation, including purchased electricity and heat
Scope 3	Other indirect emissions associated with an organisation, including the supply chain, transport and distribution, business travel and commuting, use of products, waste, investments and other leased assets or franchises.

Figure 1: Definitions of 'Scope 1,2 & 3' Greenhouse Gas Protocol category emissions.

- 4.6 Carbon Neutrality relates to Scope 1 and 2 (operational emissions). These are the emissions that the Council can in effect, control. There is no requirement for a defined reduction target to be set, with neutrality achieved through offsetting any remaining greenhouse gas emissions.
- 4.7 Net zero, as defined by the Science Based Targets initiative (SBTi), covers Scopes 1, 2 and 3 and demands emissions reductions in line with limiting global heating to 1.5°C. Furthermore, 90% of the baseline footprint must be removed by operational changes, with only 10% of the baseline footprint being removed through offsetting.

5. **RHONDDA CYNON TAF COUNCIL CARBON EMISSIONS 2024/25**

- 5.1 The Council's Carbon Emissions for FY 2024/25 were submitted to the Welsh Government by the deadline date of Monday 1st September 2025. The reported total emissions for Scopes 1, 2 & 3 for the FY 2024/25 were 122,560.47 tonnes CO₂ e. A summary of the total reported emissions for each financial year reported by Rhondda Cynon Taf County Borough Council is summarised in Appendix 1.
- 5.2 The total reported for all scopes of emissions for FY 2024/25 represents a 5.16% increase from the baseline FY 2019/20 and a 5.08% increase from the previous reporting year FY 2023/24, with emissions totalling 116,543.19 tonnes CO₂ e and 116,640.65 CO₂ e, respectively.
- 5.3 The breakdown of the carbon emissions per Emission Category for FY 2024/25 are detailed below:
- Supply Chain (75.98%) (Scope 3)
 - Natural Gas (9.50%) (Scope 1 & 3)
 - Electricity (5.54%) (Scope 2 & 3)
 - Business travel, Commuting & Homeworking (3.62%) (Scope 3)
 - Fleet & Equipment (3.97%) (Scope 1, 2 & 3)
 - Waste (0.66%) (Scope 3)
 - Street Lighting (0.60%) (Scope 2 & 3)
 - Other Fuels (LPG) / Water / F - Gases (>0.10%) (Scope 1 & 3)
- 5.5 It should be noted that from the FY 2021/22 onward, the Welsh Government introduced three additional carbon emission reporting requirements namely:
- Staff Business travel
 - Staff Commuting
 - Home Working
- 5.6 Whilst staff business travel related emissions are relatively straight forward to calculate using data from business travel mileage claims, the calculation of emissions related to staff commuting and staff homeworking was more challenging and required initial consultation with the Carbon Trust to enable the Council to make informed assumptions.
- 5.7 For the reporting FY 2022/23, an additional F-Gas category was included in the WPSNZR submission. F-Gases is the group name for those refrigerant gases used in cooling and air conditioning systems. F-Gases are highly potent greenhouse gases, some many orders of magnitude more damaging than Carbon Dioxide.
- 5.8 In order to calculate the equivalent carbon emission of each category such as kilowatt of electricity used or litre of diesel consumed, each category or sub-category is assigned a standardised carbon emission factor or coefficient by which the unit of consumption is multiplied to get the equivalent carbon emission in kg CO₂e. These carbon factors varied widely between different categories of consumption and are reviewed on a regular basis to take account of improvements in technology and methods of calculation.

6. **ANALYSIS OF THE COUNCIL'S CARBON EMISSIONS**

- 6.1 Due to the unique nature of the 2020/21 financial year and its effect on the Council's Carbon emissions, it was decided to use the 2019/20 Financial year as the Baseline Year against which progress towards the Council's 2030 target could be assessed.
- 6.2 The introduction of the additional reporting categories (Business Travel, Commuting, Homeworking and F-Gases) added a total of 4,452.41 tonnes CO_{2e} to the Council's total reported emissions for FY 2024/25. Without these supplementary elements, the Council's emissions would have reduced from 122,560.47 tonnes CO_{2e} to 118,108.06 tonnes CO_{2e}, for the reporting FY 2024/25.
- 6.3 Table 1, shown below, details the total emissions associated with Scope '1' and '2' categories, including the percentage change from the baseline year 2019/20 and the previous reporting year 2023/24.
- 6.4 The Council's emissions have reduced when compared to the baseline year and the previous reporting year as a result of all the ongoing works to reduce our carbon emissions.

Table 1: Total emissions associated with scope 1 & 2 categories in the Welsh Public Net Zero Reporting Submission.

FY 2024 - 2025		Percentage Changes	
Category	Tonnes CO _{2e}	% Change from Baseline Year 19/20	% Change from Previous Year 23/24
Natural Gas	11,639.41	▼ -14.36%	▼ -3.20%
Electricity	6,783.84	▼ -2.07%	▲ 0.62%
Waste	807.95	▼ -81.82%	▼ -45.38%
Street Lighting	740.92	▼ -12.69%	▼ -5.97%
Fleet & Equipment	4,862.56	▲ 29.65%	▼ -1.79%
Water	87.77	▼ -63.96%	▼ -23.14%
Other Fuels (LPG)	58.47	▲ 523.35%	▼ -37.81%
Business Travel, Commuting & Homeworking	4,435.26	NA	▼ -14.01%
F-Gases	17.15	NA	▲ 22.62%
Total Emissions	29,433.33	▼ -1.28%	▼ -6.16

- 6.5 Supply chain emissions continue to represent the largest proportion of the Council's 'Net-Zero' emissions, contributing to 75.98% of the Total Emissions figure. The calculation of an organisations carbon footprint for procured goods and services is currently completed predominantly using Tier 1 data based on the DEFRA source 'Conversion factors KgCO₂ per £ spent by spend category (SIC code) known as 'Emission Factors'. This means that for every pound spent in each category, a nominal amount of carbon is allocated.
- 6.6 Despite a reduction of approximately £5m across RCT when compared to the previous reporting year 2023/24, supply chain carbon emissions have increased by 9.21% from 85,276.36 tonnes of CO₂e to 93,127.14 tonnes CO₂e in FY 2024/25. This can partly be attributed to the fact that 43 of the 48 Emission Factors categories used to calculate the supply chain emissions have increased from the previous reporting year, meaning emission calculations should not be compared against the reporting FY 2023/24 data on a like-for-like basis.
- 6.7 The total of Supply Chain related carbon emissions is shown in Table 2 below.

Table 2: Total of Supply Chain related carbon emissions.

FY 2024 / 2025		Percentage Changes	
Category	Tonnes CO ₂ e	% Change from Baseline Year 2019/20	% Change from Previous Year 2023/24
Supply Chain	93,127.14	▲ + 7.38%	▲ + 9.21%

- 6.8 Natural Gas emissions for the FY 2024/25 showed a reduction of 3.20% from the previous FY 2023/24 and amounted to 11,639.41 tonnes of CO₂e. This category has seen a general downward trend due to ongoing improvements in building heating efficiencies and a general reduction in overall natural gas consumption.
- 6.9 Electricity emissions for the FY 2024/25 exhibited an upturn of 0.62% from the previous FY 2023/24 with the FY 2024/25 total equating to 6,783.84 tonnes of CO₂e. This slight increase could be attributable to several factors including the opening of the new Net Zero Schools which have electrically driven Air Source Heat Pumps instead of traditional gas boilers, resulting in an increase of electricity usage but a decrease in gas consumption.
- 6.10 Waste emissions dropped by 81.82% compared to the baseline FY 2019/20, totalling 807.95 tonnes of CO₂e for FY 2024/25 compared to 4,444.99 tonnes of CO₂e for FY 2019/20. This drastic decrease in emissions is due to changes in the emission factors for 'Waste EF not including transport' being revised down to zero. This is due to the assumption that these emissions are already reporting as fuel used/ distance travelled by HGVs in the fleet tab. As a result, our total reported emissions have dropped by 45.38 % when compared to the previous reporting year FY 2023/24.

- 6.11 Street Lighting emissions for FY 2024/25 saw a 5.97% decrease in emissions from the previous reporting year with a total of 740.92 tonnes of CO₂e compared to 788.00 tonnes of CO₂e for FY 2023/24. This reduction is attributed to a 4.72% decrease in overall consumption compared to the previous year, primarily resulting from the replacement of older LED lighting with more energy-efficient lighting units, as well as a reduction in illuminated signage across the authority in response to the Welsh Government's 20mph speed limit initiative.
- 6.12 Fleet and Equipment related emissions for FY 2024/25 have seen a 1.79% decrease from the previous reporting year with total carbon emissions for FY 2024/25 equating to 4,862.56 tonnes of CO₂e compared to 4,951.13 tonnes of CO₂e for FY 2023/24. This is due in part to the increasing number of Battery Electric Vehicles being acquired to replace combustion engine vehicles. The Council has consistently reported a reduction in Fleet and Equipment related emissions between the reporting FY 2020/21 and FY 2024/25 resulting in 5 years of continuous reductions.
- 6.13 Water supply and treatment derived emissions for FY 2024/25 saw a decrease by 23.14% when compared to the previous reporting FY 2023/24 and a 63.96% reduction when compared with the baseline reporting FY 2019/20. The total emissions for FY 2024/25 equated to 87.77 tonnes of CO₂e compared to 114.19 tonnes of CO₂e in FY 2023/24. The quality and availability of data provided by Dŵr Cymru Welsh Water remains a significant challenge. Data access is limited, and key information is frequently missing, which restricts the ability to conduct thorough analysis. Improvements in data management and reporting practices are urgently needed to support more effective collaboration and decision-making.
- 6.14 Liquid Petroleum Gas (LPG) for FY 2024/25 saw a decrease in emissions by 37.81% when compared to the previous reporting FY 2023/24 and an increase in emissions by 523.35% when compared to the baseline reporting FY 2019/20. Since the baseline FY 2019/20 an increase in emissions was initially seen because of old and (*now*) uneconomical biomass boilers being replaced with more reliable, efficient LPG heating systems.
- 6.15 Refrigerant gas emissions (*so-called F-Gases*) were included in the WPSNZR submission for the first time in FY 2022/23 and as such there is no comparison to the baseline year 2019/20. F-Gases are found in cooling and air conditioning systems. F-Gas losses occur due to equipment failure or via small leaks which are identified during annual servicing, and as such, total F-Gas losses will vary from year to year. For the reporting year 2024/25, there was a reported increase of 22.62% in F-gases emissions compared to the previous reporting FY 2023/24, with the total emissions raising from 13.99 tonnes CO₂e to 17.15 tonnes CO₂e. Due to the highly potent greenhouse gas effect associated with F-gases, a small volume of gas lost from equipment failure or small leaks results in much higher carbon equivalent emissions. It's also important to note that revisions to the F-Gases Emission Factors can make annual total comparisons difficult to achieve.
- 6.16 Business travel, commuting and homeworking emissions were introduced to the WPSNZR submission for the first time in FY 2021/22 and as such there is no comparison to the baseline FY 2019/20. For the reporting FY 2024/25 there was a 14.01% decrease in emissions from the previous reporting year with the

total emissions decreasing from 5,157.64 tonnes of CO₂e to 4,435.26 tonnes of CO₂e. As detailed in 6.15, as a consequence of emission factors being updated by the Welsh Government every year, annual comparisons on reported categories can often be difficult to achieve.

- 6.17 It is acknowledged that there is a requirement to continuously improve the data identification, collation, analysis and reporting mechanisms to take on board changes to the Council's carbon reduction activities, and service adaptations to improve the quality and robustness of the data used to complete the Public Sector Net Zero carbon submissions, and equally importantly to help inform the discussions surrounding the transition to a 'Carbon Neutral' Council by 2030.
- 6.18 Under the Welsh Government WPSNZ Reporting scheme, renewable electricity generated by the Council cannot be used to offset the Council's carbon emissions, neither can electricity from renewable generated certified sources. Consequently, the Council cannot currently use any of this data to offset our carbon emissions. However, while such generation cannot formally be counted as an offset, onsite renewable generation such as rooftop solar still has a positive impact by directly reducing the amount of grid electricity consumed by Council sites. The potential 'Off Setting' situation is currently being reviewed by the Welsh Government to identify potential changes for future reporting years.
- 6.19 Despite renewable generation not being able to be used to offset the Council's reporting emissions as detailed in 6.18, the Council remains committed to progressing towards our decarbonisation targets. The commitment is evident in the consistent output of rooftop solar installations, which generated approximately 1,713,719.10 kWh in the reporting year FY 2024/25. In addition to rooftop solar, the Council reported significant contributions from other renewable sources including 12,798,000 kWh of generation through its combined heat and power (CHPs) units at AMGEN (in Cynon) and 2,575,000 kWh of wind generation at its AMGEN site (in Rhondda).

7. EQUALITY AND DIVERSITY IMPLICATIONS / SOCIO-ECONOMIC DUTY

- 7.1 An Equality Impact Assessment is not required with regards to this report.

8. WELSH LANGUAGE IMPLICATIONS

- 8.1 There are no immediate Welsh Language requirements with regards to this report.

9. CONSULTATION / INVOLVEMENT

- 9.1 There are no consultation requirements at present with regards to this report.

10. FINANCIAL IMPLICATION(S)

- 10.1 The resources associated with the calculation of our annual Welsh Public Sector Net Zero Carbon emissions are currently covered by existing staff resources under the Energy Efficiency and Decarbonisation Working Group (EE&DWG): Carbon Footprint Sub-Group. As such, there are no further financial implications aligned to this report.

11. LEGAL IMPLICATIONS OR LEGISLATION CONSIDERED

- 11.1 There are no legal implications aligned to this report.

12. LINKS TO THE CORPORATE AND NATIONAL PRIORITIES AND THE WELL-BEING OF FUTURE GENERATIONS ACT.

- 12.1 The purpose of the report is to provide an update report relating to the progress of the Welsh Public Sector Net Zero Carbon reporting process as it relates to the work of the Energy Efficiency & Decarbonisation Cabinet Sub-Committee (EE&DCSC). The future actions that arise as a result of the recommendations of the EE&DCSC will be implemented and developed to take full regard to the seven national wellbeing goals, and the Council's Corporate Plan "Working with Our Communities 2024-2030)".
- 12.2 Leading by example, the Council is committed to taking action to become a Carbon Neutral organisation by 2030, working with residents and businesses to promote similar aspirations for the whole County Borough. These actions support the priorities of the Council's Corporate Plan "Working with Our Communities" (2024-2030) and support the four primary objectives aimed at enhancing the social, economic, environmental, and cultural well-being of Rhondda Cynon Taf, namely:
- People and Communities
 - Work and Business
 - Nature and the Environment
 - Culture, Heritage, and Welsh Language.

The Council aims to create a resilient and sustainable community, and the objective of such decarbonisation initiatives is to not only reduce carbon emissions, but to also empower local communities, support economic growth and protect our natural resources.

13. CLIMATE CHANGE IMPLICATIONS

- 13.1 The Welsh Public Sector Net Zero Reporting framework strengthens accountability and progress towards decarbonisation by standardising emissions measurements and reporting. It enables public bodies to monitor their annual carbon emissions tracking both areas of reduction and increases in carbon emissions identifying key areas for improvement. This approach supports long-term climate resilience and strengthens collaborative efforts towards Welsh Government's decarbonisation ambitions.

14. CONCLUSION

- 14.1 This report provides Members with an overview of Rhondda Cynon Taf County Borough Council's Welsh Public Sector Net Zero (WPSNZ) Reporting Submission for financial year 2024/25 summarising the data reported and key findings.
- 14.2 The WPSNZ reporting submission includes Scope 1, 2 and 3 emissions. This differs from the Council's stated 'Carbon Neutral' target, which focuses on the

reduction of Scope 1 and 2 emissions, where the Council has a certain degree of control.

- 14.3 The FY 2024/25 WPSNZ reporting submission evidences an increase in overall reported emissions, for all three scopes, compared to previous years. This variance is primarily due to revisions in the Welsh Government WPSNZ reporting guidance and the emission factors used.
- 14.4 The Council continues to implement a wide range of projects aimed at reducing future emissions across Scope '1' and '2' sources, including 21st Century 'Net-Zero' School buildings, improvements in the Council's fleet management, promotion of energy efficiency measures, infrastructure for renewable generation and further improving waste reduction. These ongoing actions are expected to contribute to support progress towards the Council's carbon neutrality targets and will continue to be reflected in the Council's annual WPSNZ reporting submission.

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To follow:

Appendix 'A' -

Welsh Public Sector Net Zero Carbon Reporting Summary