

Assessing Service Area Carbon Emissions

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Background & Context

- In June 2019 Caerphilly County Borough Council (CCBC) declared a Climate Emergency and committed to 'making Caerphilly County Borough Council a net zero carbon local authority by 2030'.
- A Decarbonisation Strategy and accompanying Action Plan was approved in November 2020.
- The four pillars of the Decarbonisation Strategy are Reduce, Produce, Offset and Buy and actions contained within the Action Plan each sit under one of these pillars.
- Welsh Government set out its second Carbon Budget which included a target to achieve net zero across the Welsh Public Sector by 2030 in 2021.

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Welsh Government Public Sector Net Zero Reporting

In May 2021 Welsh Government published the Welsh Public Sector Net Zero Reporting Guide. This is a universal guide and set of instructions for use by public bodies to estimate emissions.

[Public sector net zero reporting guide | GOV.WALES](#)

All public sector organisations in Wales are required to submit annual carbon emissions reports as part of the WG commitment to a net zero public sector by 2030.

There is a standardised spreadsheet for completion to ensure consistency across the public sector and support is offered through an online forum and through online workshops/seminars.

The guide details 3 tiers of accuracy in estimating emissions; Tier 1 is lowest accuracy and Tier 3 highest accuracy.

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Scope of Welsh Government Reporting

Reporting is aligned to the Greenhouse Gas Protocol and emissions are reported as Carbon Dioxide Equivalent (CO₂e).

This reporting covers Scope 1, Scope 2 and Scope 3 emissions related to:

- Building Emissions & Streetlighting (Electricity, Gas, Biomass etc energy use)
- Waste
- Agriculture
- Fleet & Equipment
- Business Travel, Commuting & Homeworking
- Land Use
- Supply Chain
- Renewables

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Internal Structures

- Keeping up to date service directories is key
- Work with Heads of Service and senior officers to map what belongs where and track changes
- Who has the influence, agency and ability to enact changes which will reduce carbon emissions?

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Building Emissions & Streetlighting

- Tier 3 methodology based off consumption data and emissions factors determined by DESNZ (Formerly BEIS)
- Metered consumption data split depending on building occupancy; where buildings are shared, consumption split between services dependent on occupancy levels
- Challenges – Schools with Leisure Centres without separate metering; Corporate Offices

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Fleet & Equipment

- Internal fuel recharging data
- Fuel cards
- Challenges – shared vehicles

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Waste

- Opportunity to report Municipal, Organisational and Project Waste through WG
- Currently only report Municipal; Organisational waste is collected by CCBC refuse vehicles but not separately
- Welsh Workplace Recycling Regulations April 2024

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Grey Fleet

- HR system – mileage expenses claims
- Challenges – accuracy of vehicle data; accuracy of job description/service area data

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Commuting & Homeworking

- Commuting – employee travel survey; agile working capabilities; building occupancy data
- Homeworking – Welsh Government methodology utilising number of FTE employees and proportion of time spent working from home
- Challenges – low response rate to survey

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Land Use

- UK Centre for Ecology and Hydrology Land Cover Map Layer 2021
- GIS Layers showing CCBC land and building ownership and information of service area building ownership merged with UKCEH layer
- Data Map Wales tool
- Challenges – land cover from 2021; difficult to refine; previous land use not included; soil type estimated from Landis Soilscales

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Supply Chain - Methodology

- Current methodology multiplies £spend by DESNZ emissions factor
- Spend emissions factors are categorised into UK SIC codes
- UK SIC codes mapped against internal spend categories – Spikes Cavell
- Internal cost centres used to split spend by service area

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Supply Chain – Data Challenges

- Time!
- Accuracy of Spikes/Internal spend categories
- Human Error
- Internal recharging

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Supply Chain – Moving Forward

- Quarterly collection and analysis of Spikes Cavell data
- Improved emissions calculations through supplier engagement
- Improved data accuracy through employee engagement and training
- Supply Chain Carbon Reduction Plans

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Renewables

- WG carbon reporting includes reporting on renewable energy generation as well as purchased renewables.
- Current methodology doesn't give 'credit' for purchased renewables that travel through the grid as the renewable mix of the grid is already accounted for in the grid emissions factor.
- Generation from solar PVs on buildings able to be split by building occupancy

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Visualising the Data

- Power BI utilised to visualise the data
- Filters enable services to look at separate years, directorates and individual services
- Data organised in report within WG reporting categories
- Same data is also held in Excel spreadsheets
- Currently manual process to add additional years

Summary

Building Emissions

Streetlighting

Fleet & Business Travel

Commuting & Homewo...

Land Use

Waste

Supply Chain

Year

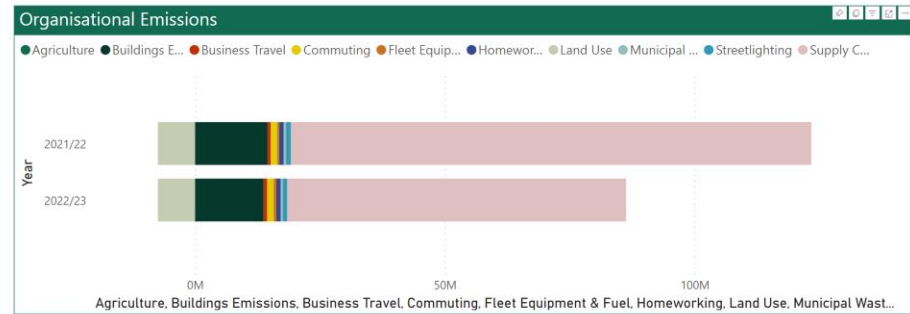
All

Directorate

All

Service Area

All



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Working with Services

- Power BI reports exported and sent to services; Power BI integrated into Decarbonisation Teams Channel
- Four working groups focused on each pillar of the Decarbonisation Strategy – Reduce, Produce, Offset, Buy
- Deeper analysis of data to understand limitations but also put in place improved collection for future reporting

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Governance

- Service area emissions reported through Directorate Performance Assessments
- From 2024/25, Carbon Budgets to be set for each service area working towards net zero by 2030. Performance to be reported through DPAs
- Decarbonisation team report annually on progress

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Carbon in Decision Making

- Four pillars of Decarbonisation Strategy incorporated into Integrated Impact Assessments
- Carbon and Co-Benefits Decision Making Tool
- Carbon emissions to be evaluated alongside financial considerations
- Carbon Reduction Plans – WPPN 06/21

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Future Ambitions

- Increased emphasis on the impact of decision making on carbon emissions and the natural environment.
- Improved data collection and methodologies
- Automation of data integration

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Questions?

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Thank you

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