



CABINET - 21ST FEBRUARY 2024

SUBJECT: DECARBONISATION ANNUAL REPORT NOVEMBER 2023

REPORT BY: CORPORATE DIRECTOR FOR ECONOMY AND ENVIRONMENT

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1. PURPOSE OF REPORT

1.1 To provide Cabinet with an update on the work undertaken across the authority to deliver the aims of the Decarbonisation Strategy.

2. SUMMARY

2.1 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'.

2.2 On the 14th June 2023 Cabinet approved 10 recommendations related to implementing the Decarbonisation Strategy and Action Plan. These recommendations included reviewing the Action Plan, and preparing an annual progress report each November.

2.3 The Action Plan has been reviewed and the number of actions reduced from 122 to 76. Updates have been provided for each of the new actions, and an assessment of progress against each action has been undertaken. Of the 76 actions:

- 12 have been completed,
- 31 are making good progress,
- 26 are making reasonable progress,
- 7 have not yet started.

A full update of all the actions and their assessed progress is attached as Appendix 2.

2.4 Carbon baseline data was submitted through the Welsh Public Sector Net Zero Carbon Reporting Scheme in September 2023, in line with the Welsh Government reporting requirements. For the reporting year 2022/23 CCBC reported an emissions total of 103,308,185 kgCO₂e (22,110,491 kgCO₂e operational emissions plus 81,197,694 kgCO₂e supply chain emissions). This was offset by -7,413,691 kgCO₂e through our land use, giving a submitted carbon emissions figure of 95,894,494 kgCO₂e (or 95,894 tCO₂e).

2.5 The reported emissions for 2022/23 were an increase of 1,637,192 kgCO₂e or 1.74%. The increase is as a result of changes to Welsh Government reporting

methodologies which have brought in additional areas; better data and increased overall expenditure. The changes mean that it is difficult to make direct comparisons of year-on-year trends, but this should be easier as the methodology improves.

3. RECOMMENDATIONS

- 3.1 That Cabinet notes the progress made to date on the actions set out in the Decarbonisation Annual Report.

4. REASONS FOR THE RECOMMENDATIONS

- 4.1 To contribute to the Council's commitment to become net zero carbon by 2030.

5. THE REPORT

- 5.1 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'.
- 5.2 2022/23 marked the first year with a dedicated Decarbonisation team in place within the organisation. Recruitment of a team of four officers was completed in January 2023. The first 9 months of work has focused on establishing structures to take forward the work, including reviewing the Decarbonisation Action Plan that was approved in November 2020. Several significant projects including the 20MW Cwm lfor Solar Farm, and Covid Memorial Woodland have been progressed, as have opportunities to reduce revenue costs as part of the Mobilising Team Caerphilly work.
- 5.3 On the 14th June 2023 Cabinet approved 10 recommendations related to implementing the Decarbonisation Strategy and Action Plan. These recommendations included reviewing the Action Plan, and preparing an annual progress report each November.
- 5.4 The Strategy and Action Plan were structured on four pillars with an overarching section on corporate or cross-cutting actions. The pillars are:
- **Reduce** - Focussing on reducing the amount of energy we use through good housekeeping, changing behaviour and capital investment including insulation, low energy lighting or more efficient heating systems.
 - **Produce** - Generating our own 'green' electricity and heat through technologies such as photovoltaic systems or solar thermal.
 - **Offset** - Offsetting any carbon emissions through habitat management or tree planting.
 - **Buy** - Everything we purchase has embedded carbon associated with it and this will need to be considered in the procurement process
- 5.5 In line with recommendation 4, in the June 2023 Cabinet report, working groups were established to drive forward the work on each of the 4 pillars. Each working group reviewed the actions relating to that group to focus on the 2030 organisational requirements, and to align with the WG route map and timeframes. Actions relating to the Welsh Government territorial emissions aspiration, that each geographic area is net zero carbon by 2050 were removed.

- 5.6 As a result of the reviews of the Action Plan the number of actions has reduced from 122 to 76. Updates have been provided for each of the new actions, and an assessment of progress against each action has been undertaken. Of the 76 actions:
- 12 have been completed,
 - 31 are making good progress,
 - 26 are making reasonable progress,
 - 7 have not yet started

Corporate and Cross-Cutting Actions

- 5.7 The Corporate and Cross-Cutting section of the Decarbonisation Action Plan focuses firstly on measuring and understanding organisational emissions so that actions for emissions reductions are targeted and measurable. Secondly, there is a need for dissemination of this information and knowledge. A program of awareness raising, and skills development is key to ensuring that decarbonisation is embedded into the organisation's ways of working.
- 5.8 The Decarbonisation Team reviewed the previous Action Plan, revised and agreed the Corporate and Cross-Cutting section into 11 actions (See Appendix 2).
Of these actions:
- 1 has been completed
 - 4 are going well with good progress
 - 3 have had reasonable progress
 - 3 are not yet started.
- 5.9 For the reporting year 2022/23 CCBC reported an emissions total of 103,308,185 kgCO₂e (22,110,491 kgCO₂e operational emissions plus 81,197,694 kgCO₂e supply chain emissions). This was offset by -7,413,691 kgCO₂e through our land use, giving a submitted carbon emissions figure of 95,894,494 kgCO₂e (or 95,894 tCO₂e). The reported emissions for 2022/23 were an increase of 1,637,192 kgCO₂e or 1.74%.
- 5.10 The overall increase was in part driven by an increase in third party spend of £31.1 million which resulted in an increase in supply chain emissions of 2,080,108 kgCO₂e or 2.63%. Operational emissions decreased by 449,714 kgCO₂e or 2% as a result of reductions in streetlighting, buildings and waste emissions. Emissions from business travel (grey fleet) and commuting increased due to improvements in data collection. Reporting on F-gases (Fluorinated gases) was included for the first time resulting in a 9,187 kgCO₂e increase.
- 5.11 Changes to the Welsh Government methodology and scope of reporting mean that it is difficult to make direct comparisons of year-on-year trends, but this should be easier as the methodology improves.
- 5.12 The Decarbonisation Team has produced emissions baselines and footprints for each Directorate and Service Area, aligned with Welsh Government Net Zero Carbon Reporting for 2021/22 and 2022/23. The data is contained in spreadsheets and visualised using Power BI reports. To enable understanding of these emissions presentations have been developed with delivery and timeline to be agreed.
- 5.13 An initial cohort of 22 officers have completed Carbon Literacy training accredited by the Carbon Literacy Project and delivered by Cynnal Cymru.

The included officers from the Decarbonisation Strategy Working Groups, the wider Transformation Team and colleagues who had completed the Infuse Programme with a focus on Accelerating Decarbonisation.

Reduce Actions

- 5.14 The scope of the work under the Reduce heading means that this section of the Decarbonisation Action Plan is the largest, crossing many services and existing work streams. The identified targeted areas for action are:
- Existing Buildings – Corporate and Domestic
 - New Developments – Corporate and Domestic
 - Streetlighting
 - Travel & Transport
 - Waste Management
- 5.15 The Reduce working group and other stakeholders reviewed the previous Action Plan, revised and agreed the Reduce section into 30 actions (See Appendix 2). Of these actions:
- 4 are completed
 - 13 are going well with good progress
 - 11 have had reasonable progress
 - 2 are not yet started
- 5.16 Caerphilly CBC is responsible for 778 non-domestic sites with a combined gross internal area of 475,534 m². Reducing energy consumption of buildings is mostly achieved by improving the fabric of the buildings, improving the regulation of energy consumption, and reducing the emissions of the energy used through generating or using renewable energy.
- 5.17 The Energy Team have reviewed the existing backlog maintenance requirements for non-domestic buildings alongside Energy Performance and required upgrades for improved energy efficiency. From this exercise, priority sites for upgrades have been identified to form the initial phase of a full programme of works to improve the energy efficiency of non-domestic buildings. High-level costings of technologies to reduce carbon emissions of buildings have been provided which can be extrapolated based on internal floor area. These numbers will be improved as we move through the programme of works. From these high-level costings, a framework for contractors will be produced through the works can be procured. Funding opportunities for these works are continually being explored to include the Salix Invest to Save Scheme as well as Welsh Government Low Carbon Heat Grants.
- 5.18 Service Asset Management Plans (SAMPs) have been reviewed by the Asset Management Working Group and a list of identified properties that will be targeted in the short, medium and long term for vacating by services has been produced. As part of this options appraisal, the number of sites, running costs, backlog maintenance costs, lease costs, potential rental revenue and potential capital receipts are considered alongside the needs of the Service. This process has the potential to reduce number of Corporate Office sites, to streamline the estate and achieve improved efficiencies at remaining sites.
- 5.19 As of 30th September 2023, a total of 544 vehicles made up our fleet. This number represents a decrease of nearly 80 vehicles from 620 in the summer of 2020.

Installation and commissioning of EV charging infrastructure to date provides the charging capacity for around 100 fleet EVs. The breakdown is as follows:

- Ty Penallta charging hub – 15 double 7kW chargers.
- Tir y Berth charging hub (old Meals on Wheels site) 7 double 7kW chargers.
- We now have a total of 53 charge points on the CCBC charging network.
- This work includes the setting up of the back-office system to manage the charging network, monitoring of charge sessions (including electricity use and CO2 savings) and, where necessary, internal recharging.

5.20 A programme to convert all the county borough's street lanterns to LED was completed in January 2021. Concurrently, the authority has implemented part night lighting, between the hours of midnight and 5.30am, to all lighting, except at junctions and in major town centres. Cabinet approved the continuation of reduction in streetlight operating hours in November 2022, which resulted in a further 18.33% reduction in energy consumption from streetlighting in 2022/23.

Produce Actions

5.21 The Decarbonisation Strategy acknowledged the importance of generating our own "green" electricity and heat. The group has reviewed the Produce actions contained within the original Decarbonisation Action Plan under the Produce Pillar. The agreed new Produce Action Plan contains 12 actions (see Appendix 2).

Of these actions:

- 2 have been completed
- 6 are going well with good progress
- 3 have had reasonable progress
- 1 is not yet started

5.22 The authority has already installed Photovoltaic (PV's) panels on the roofs of 63 of its buildings. In some instances, these are small demonstration arrays on schools, but the authority has also installed larger arrays to good effect and is currently investigating its collective non-domestic roof space for medium sized PV arrays. In total 594,863 kWhrs of renewable energy is generated from these schemes.

5.23 The development of the flag ship, 20MW Cwm lfor Solar Farm is progressing well with a planning decision expected in February 2024 and probable construction, subject to Cabinet approval, in 2025. It is anticipated that when operational the solar farm would generate 23GWhrs of electricity per year, or enough to power around 6,000 homes. At current energy prices it will create income of between £669,000 and £892,000 per year over the 35-year life of the project.

5.24 The authority has undertaken a review of its capacity to generate hydroelectricity from rivers and streams on Council owned land. To date there is limited opportunity to progress projects although Cwmcarn Forest has been identified as offering some opportunity to generate electricity for onsite use at the visitor centre. An assessment has been commissioned to determine costs and potential payback for the scheme. It is estimated that a 27kW turbine could be installed onsite, which would produce at least half of the visitor's centre annual electricity requirements.

5.25 The original Decarbonisation Strategy identified that the Council has local arrangements in place at Bryn Quarry where Council collected food waste is converted into green energy via an Anaerobic Digester. Discussions have begun with the Bryn Group to identify opportunities, with an initial study being initiated to review options and

to develop an outline business case. This has included assessing the best route for any hardware, to identify any land studies or further ecological studies that may be required. As part of understanding the viability of the project, negotiations have begun on Heads of Terms and the principles of any potential power purchase agreements. A report on progress and business case development is due to be considered by the Corporate management Team.

Offsetting Actions

- 5.26 The Offset Working Group has been established and has reviewed the Offset actions contained within the original Decarbonisation Action Plan under the Offset Pillar. The agreed new Offset Action Plan contains 14 actions (see Appendix 2). Of these actions:
- 4 have been completed
 - 5 are going well with good progress
 - 4 have had reasonable progress
 - 1 not yet started
- 5.27 Detailed land mapping and evaluation has been undertaken to identify existing habitats to be protected and to identify land for tree planting. The authority owns 1,143 hectares of forest land which offset 8,306,886 kgCO₂e in 2022/23
- 5.28 Planting has been agreed on Countryside land for the 23/24 planting season. Designs and plans have been produced and agreed for sites at Ynys Hywel and Parc Cwm Darran. Approximately 15,000 trees will be planted at those sites, with around 3,000 being planted by volunteers. Initial sites on Housing and Infrastructure land for planting during the 2024/25 planting season have been identified with ecological surveys and initial feasibility work being undertaken.
- 5.29 One of 3 Covid Memorial Woodlands across Wales has been developed at Ynys Hywel. The new memorial park, covering an area of 7 hectares, seeks to complement the existing country park, and importantly retain key views across the valley and the overall rural character of the site. A total of 36,500 native trees and shrubs were planted in 2022/23, with 3,700 planted by volunteer groups. Further volunteer planting will continue for the next 5 years.
- 5.30 A Cabinet commitment was given to “set a target of planting 300,000 trees by 2030, where land availability allows”. To date a total of 81,000 trees have been planted since the Decarbonisation Strategy was approved.

Buy Actions

- 5.31 The Buy Working Group has been established with core members from Decarbonisation and Procurement alongside nominated representatives from each Directorate. This group has reviewed the existing Decarbonisation Action Plan under the Buy Pillar and agreed an updated Action Plan with 10 actions (see Appendix 2). Of these actions:
- 1 has been completed
 - 5 are going well with good progress
 - 2 have had reasonable progress
 - 2 have not yet started
- 5.32 Analysis of 22/23 spend data from Spikes Cavell has been completed to identify priority areas for further investigation. Similar to other local authorities, a large proportion of spend sits with a small number of suppliers and so understanding these

emissions and taking steps to reduce them will initially require engagement with a relatively small group of our suppliers.

- 5.33 Social care services spend contributes the most carbon to supply chain emissions using current methodologies as it represents the largest spend. More detailed analysis of this spend and the constituent parts has been completed for the previous year's spend. And as such social care has been identified as a priority area for trial of new carbon calculating toolkits and engagement with suppliers.
- 5.34 A list of upcoming contracts which might be suitable for further consideration as part of this work is being compiled to understand the actual emissions associated with these contracts so that improved methodologies can be used for emissions reporting.
- 5.35 Various decarbonisation and carbon calculating toolkits have been reviewed by the working group to determine which toolkits best suit each service within the organisation.

6. ASSUMPTIONS

- 6.1 It has been assumed that the WG guidance and net zero carbon reporting methodology will not change again. Previous reporting has changed which has made it impossible to compare year on year progress.

7. SUMMARY OF INTEGRATED IMPACT ASSESSMENT

- 7.1 The IIA identifies that as this covers a strategy there is no direct impact to service delivery from the provision of the strategy document. Impacts that come about as a result of the implementation and roll out of the strategy will be assessed in due course.

There will be CO₂ and greenhouse gas savings which will provide health and wellbeing benefits, and other advantages to be gained from the implementation of the strategy.

Link to IIA

8. FINANCIAL IMPLICATIONS

- 8.1 A budget of £500,000 was allocated for decarbonisation work by Cabinet in 2020/21. As of 30th September 2023 £56,344, has been spent from this budget. An additional £140,000 has been allocated to Cwm lfor solar farm. Further expenditure has been identified against hydrogen feasibility work, carbon literacy training, the hydro-electric scheme at Cwmcarn and private wire costs.
- 8.2 The internal Salix Local Authority Energy Fund (LAEF) invest to save scheme has invested over £2 million in energy efficient technologies in projects in corporate, non-domestic buildings which meet the scheme and pay back criteria. This will continue to be an important element in delivering our net zero ambitions.
- 8.3 The authority has been successful in securing funding from various grant sources to support this work. Identifying and securing grant support is an important element of achieving our decarbonisation targets.

- 8.4 Calculating the cost of becoming carbon neutral by 2030 is extremely difficult. Tools and studies to identify the cost of various elements of the work are in progress. This will provide high level costings for the decarbonisation of non-domestic buildings, investment in renewable energy generation to meet future needs, and offsetting forecasted residual emissions by 2030 to achieve Net Zero Carbon. This work is to be prioritised for the next year as a key action for the Decarbonisation Team.
- 8.5 Specific, detailed, and costed proposals for future work will be developed and brought forward as future reports for consideration.

9. PERSONNEL IMPLICATIONS

- 9.1 The Corporate Director Lead will be the Corporate Director for Economy and Environment. The Decarbonisation agenda is currently being driven by the decarbonisation team as well as the energy team in property services and in the longer term it would be more appropriate to create a single structure for delivering decarbonisation with all staff reporting to a single Head of Service. The decarbonisation performance data will feature in the Economy and Environment Directorate Performance Assessment (DPA) and Annual reports on progress against the agreed Decarbonisation Action Plan will be provided to the Environment and Sustainability Scrutiny Committee followed by Cabinet. Annual reports to Welsh Government through the Welsh Public Sector Net Zero Carbon Reporting Scheme will also be required.
- 9.2 For the authority to become carbon neutral by 2030 a whole organisation approach and cultural shift will be required. Service areas will need to allocate staff resources to understand and to reduce their emissions. Significant work will be required to build knowledge, understanding, and the skills required to enable all employees across the authority to play their part in delivering the Decarbonisation Strategy
- 9.3 The Decarbonisation Team will have a key role to play in driving forward this agenda, co-ordinating work, facilitating training and managing individual projects. The establishment of the four corporate pillar groups; Reduce, Produce, Offset and Buy are an important element, which should be the catalyst to drive culture change in services but also requires continuation of specific input from services. These groups are being co-ordinated by the Decarbonisation Team. The Team will also work with each directorate to enable them to understand their emissions, to identify priorities for reduction and to support with decarbonisation projects. Project specific work will be undertaken with all services, but will require input from Finance, Procurement, Legal and Property, plus support from HR, IT and Policy on specific work. Additionally, opportunities will be considered to engage employees in a “bottom up” approach to assist in mobilising employees in this programme of works.

10. CONSULTATIONS

- 10.1 The views of the listed consultees have been reflected within this report.
- 10.2 The report was considered by the Housing and Environment Scrutiny Committee on the 12th December 2024. The Committee noted the progress made to date on the actions set out in the Decarbonisation Annual Report and commented on the approach taken in relation to, and the content of this first annual progress report.

11. STATUTORY POWER

11.1 Climate Change Act 2008.

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Consultees: Cllr James Pritchard – Deputy Leader and Cabinet Member for Prosperity, Regeneration and Climate Change
Cllr Nigel George – Cabinet Member for Corporate Services, Property and Highways
Cllr A Whitcombe Chair Housing and Environment Scrutiny Committee
Cllr S Williams Vice Chair Housing and Environment Scrutiny Committee
Richard Edmunds, Corporate Director, Education and Corporate Services
Dave Street, Deputy Chief Executive
Mark S Williams, Corporate Director of Economy and Environment
Rob Tranter, Head of Legal Services/ Monitoring Officer
Stephen Harris, Head of Financial Services and S.151 Officer
Sue Richards, Head of Transformation and Education Planning and Strategy
Keri Cole, Chief Education Officer
Ben Winstanley, Head of Land and Property
Lynne Donovan, Head of People Services
Liz Lucas, Head of Customer and Digital Services
Marcus Lloyd, Head of Infrastructure
Rhian Kyte, Head of Regeneration and Planning
Rob Hartshorn, Head of Public Protection, Community and Leisure Services
Nick Taylor-Williams, Head of Housing
Jo Williams, Assistant Director – Adult Services
Gareth Jenkins, Interim Director of Social Services
Allan Dallimore, Regeneration Services Manager
Paul Rossiter, Energy and Water Officer
Heather Richardson, Decarbonisation Project Officer
Environment and Sustainability Scrutiny Committee.

Appendices

Appendix 1. Decarbonisation Annual Report November 2023

Appendix 2. Updated Decarbonisation Action Plan November 2023