



**REPORT of
DIRECTOR OF SERVICE DELIVERY**

**to
COUNCIL
11 JULY 2024**

UPDATE ON THE COUNCIL'S NET ZERO CARBON EMISSIONS AND TRAJECTORY

1. PURPOSE OF THE REPORT

- 1.1 To update Members on the work being done by officers to reduce Council carbon emissions to net-zero by 2030.
- 1.2 To update Members on the potential challenges and barriers to the Council achieving net-zero by 2030.
- 1.3 To seek agreement from Members on a methodology to review the current Council commitment of achieving net-zero by 2030 in order to ensure delivery of carbon emission reductions take place in a sustainable and practicable way.

2. RECOMMENDATIONS

- (i) That Members consider the information within this report and accept the conclusions of the trajectory report.
- (ii) That Members agree to the creation of a Member and Officer Net-Zero Working Group that will consider the Council's route to net-zero including making future recommendations to Council on its strategy for achieving net-zero.

3. SUMMARY OF KEY ISSUES

- 3.1 On 4 February 2021, the Council declared a Climate Emergency with the aspiration that all strategic decisions, budgets and approaches to planning and regulatory decisions are in line with a shift to net-zero by 2030.
- 3.2 Following the declaration, the Council produced the [Climate Action Strategy 2021-2030](#) and a 2023 / 24 Climate Action Plan (CAP). One of the actions within the CAP was to produce a roadmap – showing a trajectory to net zero carbon emissions.
- 3.3 In 2023 / 24, the Council worked with the Association for Public Service Excellence (APSE) to develop a Net Zero Trajectory report (**APPENDIX 1**).
- 3.4 The trajectory report calculated the Council's carbon emissions baseline taking into account its operations and assets from a baseline year of 2022 / 23. This information was then used to project a "best case" scenario for Council emissions in 2030 should all possible carbon saving interventions be implemented.

- 3.5 Emissions were calculated and projected in accordance with best practice guidelines from Greenhouse Gas Protocol standards and are shown as carbon dioxide equivalent (CO₂e), which is a term for describing the seven most threatening greenhouse gases in a common unit. Further details can be found in **APPENDIX 1**, page 9.
- 3.6 Using this methodology, it has been calculated that for the baseline year, the Council emitted 1,199 tonnes CO₂e as a result of its activities and operations (please see **APPENDIX 1**, page 12, table 2.2).
- 3.7 The Council's carbon emissions are categorised as follows:
- Scope 1 (direct) - these are emissions from activities owned or controlled by the Council and include our fleet of vehicles, boilers, heating systems etc.
 - Scope 2 (indirect) - these are emissions associated with purchased electricity and gas.
 - Scope 3 (other indirect) - these are emissions that occur as a result of the Council's actions that occur at sources which we do not own or control and that are not already classed as Scope 2. For the Council, these emissions include officer travel, waste collection, and leased assets.
- 3.8 The analysis shows that the largest contributors to the Council's emissions are as follows:
- Leased Assets (largely comprised of energy used at the leisure centres)- 514 tCO₂e (43%) - Scope 3
 - Contractor Travel (largely comprised of the refuse fleet)- 363.2 tCO₂e (30%) - Scope 3
 - Electricity- 117.3 tCO₂e (10%) - Scope 1

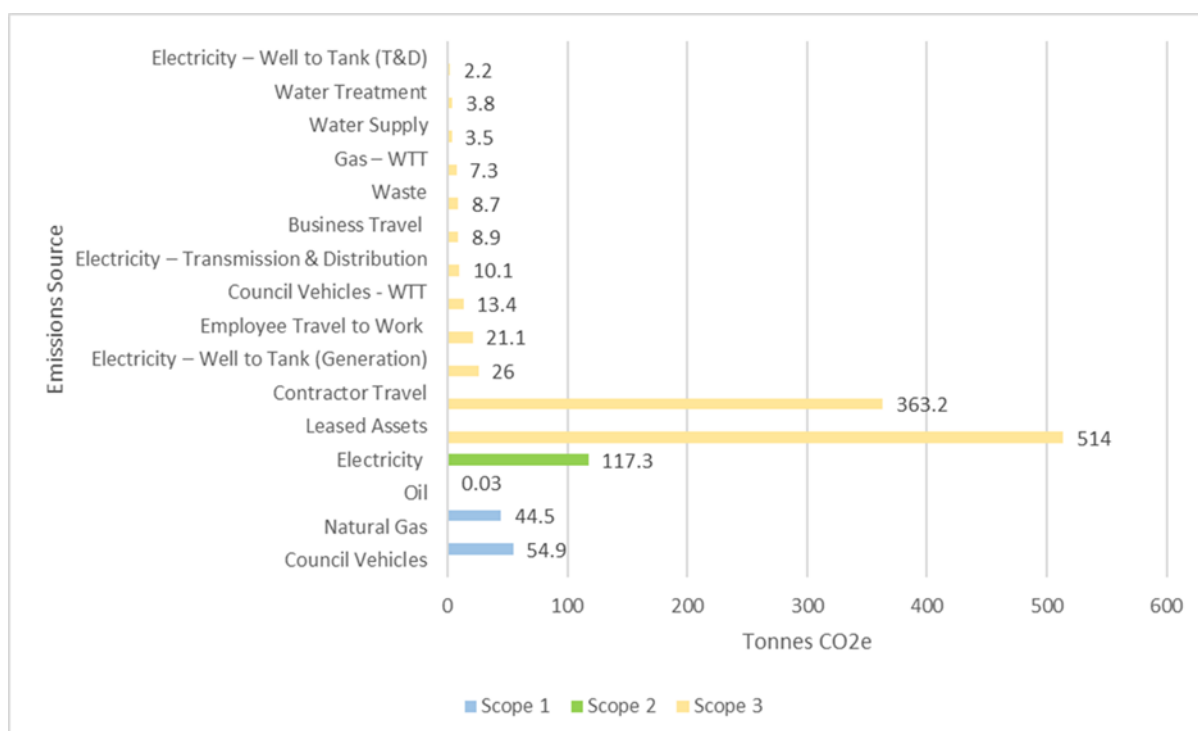


Figure 1: Graph showing emission sources for Maldon District Council

- 3.9 In total, Scope 3 emissions account for approximately 82% of the Council's carbon emissions. This is typical across the Local Authority sector. It should be noted that following the purchase of the new refuse vehicles by the Council for our contractors use, a significant proportion of contractor travel will be classified as a Scope 1 emission in future years.
- 3.10 The data from the baseline year was used to develop emission trajectories based on potential future scenarios. These are outlined in **APPENDIX 1**, section 6.3, pages 23 – 25B.
- 3.11 Should the Council not adopt any significant changes to achieve net-zero and instead adopt a “Business-as-Usual” (BAU) approach (Figure 2 below), the trajectory report estimates that by 2030 the Council's emissions will fall to around 1,117 tCO₂e (a reduction of 7%). This will mainly be achieved though national decarbonisation of the energy grid.

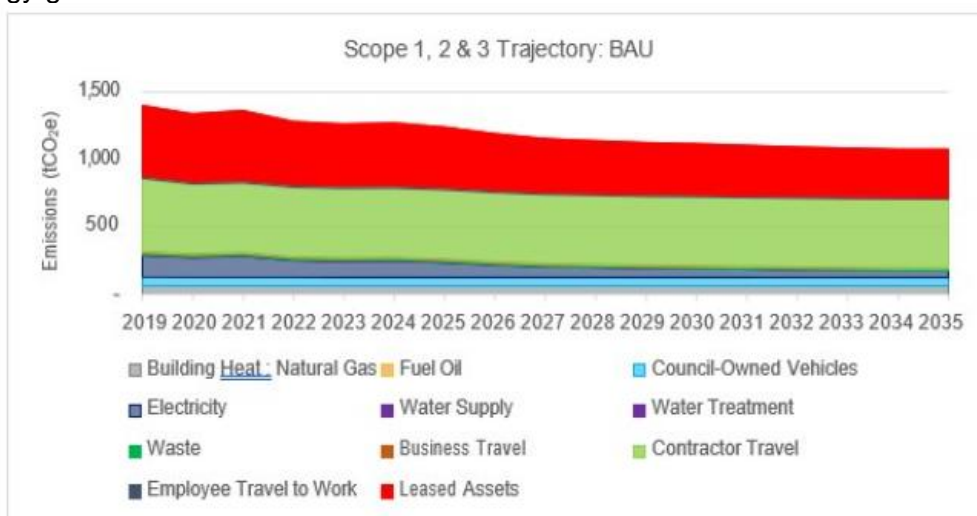


Figure 2: Graph showing Council Carbon emissions in a Business as Usual Scenario

- 3.12 The projected ‘best case’ trajectory for the Council to meet net-zero by 2030 is shown in figure 3 below. This trajectory assumed efficiencies could be delivered across all Scope 1, 2 and 3 emissions including:
- transition of all fleet/ council vehicles (including refuse freighters) to Ultra-Low Emission Vehicles (ULEV)- i.e. Electric or equivalent alternative.
 - transition to Air Source Heat Pumps (ASHP) in all Council Assets (including those that are leased).
 - implementation of solar generation on Council buildings and land (minimum 1,300 kWp).
 - optimisation of energy efficiency across the Council estate (including leased assets).
- 3.13 In this scenario, Council emissions could fall to 119 CO₂e (a reduction of 91%). The remaining 9% of emissions would need to be offset through carbon negative initiatives, green energy schemes or carbon capture.

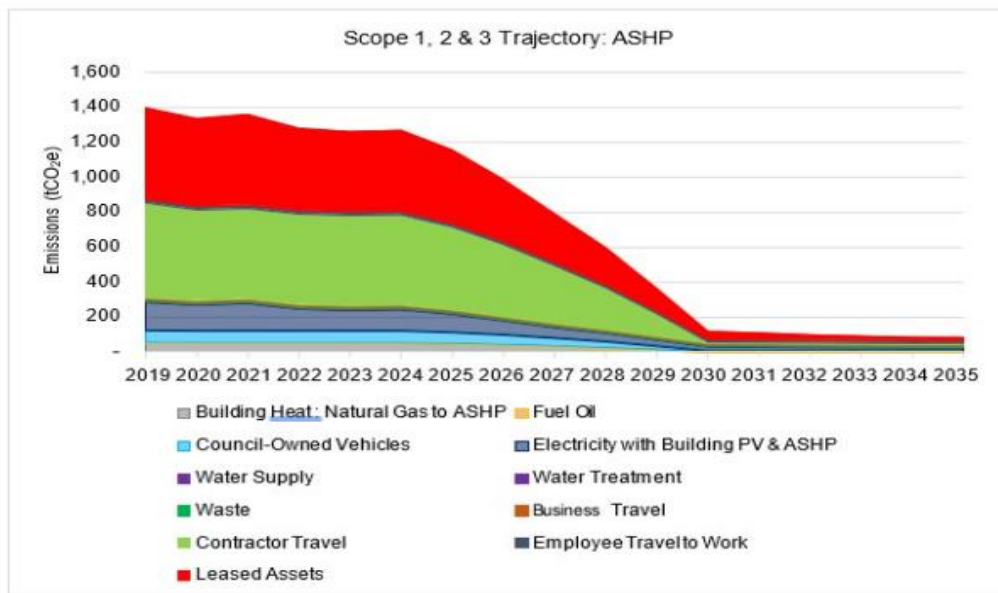


Figure 3: Graph showing best case scenario trajectory to net-zero by 2030.

- 3.14 It is estimated that were the Council to implement all of the measures required to achieve a best case scenario then annual savings of up to £143,000 may be achieved (**APPENDIX 1**, page 30, figure 11).
- 3.15 The report provides indicative capital costs for the best-case scenario (c with offsetting), of £6 million (£3.9 million for Council own assets and a further £2.1 for leased assets). It should be noted that the costs were established without detailed site visits or feasibility studies. The Council will need to undertake detailed feasibility studies of each element to establish the true financial costs of achieving net-zero in each area. It is however anticipated that the costs will be significantly higher than those predicted in the trajectory report.
- 3.16 As outlined in figure 3, the Council needs to begin implementing operational changes within the financial year 2024 / 25 if it is to realistically achieve the best-case scenario trajectory. These changes would need to be implemented at pace across all areas of Council operations and likely with significant unbudgeted cost.
- 3.17 The following operational barriers have also been identified which could impede the Council's ability to deliver upon the 'best-case scenario':
- Council Refuse Vehicles - The Council has recently purchased eight diesel refuse freighters (delivered in May and June 2024). These vehicles have a minimum lifecycle of eight years and consequently are not due for replacement until 2032 at the earliest. Whilst electric vehicles and hydrogen technologies for HGVs are becoming more available, there remains some doubts about their current suitability for a rural district such as Maldon.
 - Council Leisure Centres - Owing to the high energy consumption of these assets, significant changes to building structure and operating plant / equipment will be required to reduce their carbon emissions. These works are likely to be extremely costly. Please refer to: Leisure Contract Procurement update report 11 July 2024 for further details on the leisure contract.
 - Princes Road Offices - Whilst the Council offices are not the largest emitter it is anticipated that owing to the age of the building, its structure and layout that significant investment will be required to ensure it is suitable for the implementation of Air Source Heat Pumps. Further, it is considered that

detailed structural surveys would be required before PV solar panels could be installed to support green energy generation.

- 3.18 In addition to the challenges above, Essex County Council and National Government have set different targets to achieve net-zero. Both have affirmed commitments to the legally binding target of 2050. Whilst this does not directly affect any decision made by the Council, it is likely to have an impact on the availability of funding streams and support especially for larger strategic projects including transport infrastructure.
- 3.19 In order to support its journey towards net-zero, the Council may be able to apply for external funding or grants such as the Public Sector Decarbonisation Scheme (PSDS). Such funding often requires an element of match funding depending on the scale of carbon reductions that proposed work is likely to achieve. In order to access such grants, the Council would need to conduct a detailed feasibility study for the relevant asset to identify practicable measures to reduce carbon consumption and associated costs.
- 3.20 Where the Council is unable to implement measures to bring its emission sources to net-zero by 2030, it will be necessary to increase off-setting measures to compensate.
- 3.21 In order to understand the financial, technical, and operational impact and compromises that may be necessary to become net-zero, officers are now intending to undertake a range of detailed feasibility studies for the following areas:
- Council buildings;
 - Refuse Vehicles;
 - Leased Assets.
- 3.22 These studies will provide more detailed advice on what will be required for the Council to decarbonise including developing practicable solutions bespoke to our Council. Owing to the detail needed such surveys are likely to take around three months each to complete.

4. CONCLUSION

- 4.1 The Council has set itself a current target to become net-zero by 2030. This target was set by Council and is not legally binding. Nationally the UK government is working to a target of 2050, and this has been replicated by Essex County Council.
- 4.2 The trajectory report produced by APSE has calculated the Council currently emits 1199 tCO₂e of carbon each year (baseline year of 2022 / 23) and has provided an indicative trajectory that will need to be followed if the Council is to achieve net-zero by the target date.
- 4.3 There are a number of significant barriers that have been identified that will impact upon the Council's ability to achieve net-zero by 2030 including financial resources needed to convert / upgrade buildings and change vehicles, availability and applicability of technology, relevant expertise, and constraints of national policy.
- 4.4 Officers are recommending that Council consider the creation of an appropriate working group to focus on the challenges and barriers to achieving net-zero. This working group may wish to consider if the existing target date to become net-zero in

2030 remains realistic and achievable and if not develop a new approach and timeline for the Council to reduce its emissions to net-zero.

5. IMPACT ON PRIORITIES AS SET OUT IN THE CORPORATE PLAN 2023 - 2027

5.1 Supporting our communities

- 5.1.1 The Council has made a commitment to becoming net-zero by 2030 and lead the community by example. The decisions that will need to be made to achieve net-zero will bring long term sustainability benefits and will demonstrate to businesses and residents our commitment to the environment.

5.2 Smarter finances

- 5.2.1 This report helps the Council make informed decisions regarding the future of its assets including information to support investment decisions, programmes or work etc. Implementing net zero initiatives will provide long term financial benefits to the Council.

5.3 A greener future

- 5.3.1 This report provides a data-based approach to achieving net-zero and its findings can be used to inform the Council's journey to decarbonisation.

5.4 Provide good quality services.

- 5.4.1 The trajectory allows Members to have an increased understanding of the challenges faced by the Council in order to achieve net-zero. This in turn allows them to make best value and informed decisions about its resources.

6. IMPLICATIONS

- (i) **Impact on Customers** – This report helps support our commitment to 'lead by example'.
- (ii) **Impact on Equalities** – None.
- (iii) **Impact on Risk (including Fraud implications)** – A methodical and informed approach to operational net zero helps to reduce the risk of carbon emission increases and helps the Council to be better prepared for when future climate and environment legislation and standards come into force.
- (iv) **Impact on Resources (financial)** – A methodical and informed approach to operational net zero and the creation of decarbonisation plans will help with future funding applications.
- (v) **Impact on Resources (human)** – This report helps the Council focus resources on areas of greatest benefit when implementing decarbonisation measures.

Background Papers:

APPENDIX 1 - Net Zero Trajectory report

[Climate Action Strategy | Maldon District Council](#)

[Climate Action Plan | Maldon District Council](#)

Enquiries to:

Claire Williamson, Technical Lead: Climate Action

Nick Chapman, Head of Environmental Health, Waste & Climate Action