Warwickshire County Council Energy Strategy

(*Please Note – Comms Team will be supporting on layout, pagination, graphics and Appendices before issue)*

Foreword (draft – pending approval from Cllr Timms)

Taking action to ensure Warwickshire has a sustainable future is a key strategic priority for Warwickshire County Council and sustainable energy management has a critical role to play in us reaching our goal of becoming a net zero Council by 2030.

The implementation of this Energy Strategy will enable us to effectively address our energy needs by reducing consumption, optimising usage, generating renewable energy, and establishing robust measurement mechanisms. The Strategy primarily focuses on those property assets owned and occupied by the Council, however we recognise that our energy consumption extends beyond this and also that we have a key role, working with partners, to support Warwickshire residents and businesses to create greater energy security. We will use this Strategy to influence on the widest possible basis.

The Strategy has been informed by engagement with stakeholders, it acknowledges the scale of the challenge, recognising that establishing a low carbon estate will require significant financial investment. Many of the actions will relate to our property portfolio. We will therefore need to work across the Authority, and with the support of Cllr Peter Butlin, Portfolio Holder for Finance and Property, to identify and capitalise on those opportunities.

Our approach for sustainable energy management is not limited to the Council alone, and as part of our ambition to lead the County to be net zero by 2050 or earlier, this Strategy also extends its benefits by actively supporting Warwickshire residents and businesses in their pursuit of sustainable energy practices.

By linking these three crucial elements—strategic priority, net zero objectives, and support for stakeholders—the Energy Strategy will pave the way to make Warwickshire sustainable now and for future generations.

Cllr Heather Timms, Portfolio Holder for Environment, Climate and Culture

Executive Summary

This Energy Strategy has been developed to support both the overarching Council Plan's strategic priority to be a County with a sustainable future, adapting to and mitigating climate change and meeting net zero commitments, and the Sustainable Futures Strategy's focus areas of energy, built environment and resources & waste.

The Strategy also incorporates and replaces the previous Warwickshire Energy Plan and the WCC Energy Policy, setting out a clear action plan for sustainable energy management, and how we plan to reduce, use, generate and measure our own internal energy requirements (and therefore CO2) to ensure we meet all applicable energy legislation requirements, support the Council's net zero targets and offer guidance to Warwickshire residents and businesses.

We believe this Energy Strategy will bring a range of benefits. These include a reduction in greenhouse gas emissions and a smaller carbon footprint, but also associated improvements in the management of water, gas, electricity, and waste; all of which collectively will lead to improved energy security and financial savings.

Strategy Connections

The Energy Strategy has been developed in a way that aligns with other relevant WCC strategies, policies and programmes to improve the connectivity, delivery and integration across the Council.

The Energy Strategy complements the Council Plan and Sustainable Futures Strategy but also the individual Property, Smallholdings, Commercial and Electric Vehicle Charging Infrastructure strategies. It is also aligned to the County-Wide approach to Levelling Up and its commitment that future generations can live in a sustainable county with good opportunities and quality of life, including standards of living. The Strategy also has connections to the ISO14001 certified WCC Environmental Management System which supports continuous improvement in areas such as use of natural resources and the wider impacts of waste generation in our own buildings.

Strategy Development

The Strategy has been created following an assessment of relevant standards and legislation, the output of our engagement with the public on the draft Sustainable Futures Strategy and after engagement with key stakeholders (including relevant internal experts).

It also includes input from elected members through the Resources and Fire and Rescue Service Overview and Scrutiny Committee, Communities Overview and Scrutiny Committee and the Climate Emergency Cross-Party Group and has been steered by an internal officer Working Group.

Scope

To support our WCC 2030 targets, the primary scope of the Energy Strategy will be those sites and assets where WCC is landlord, occupier and holds responsibility for full repairs, maintenance and operational costs ('centralised' assets). This includes offices, Libraries, Children & Family Hubs, Business Centres, Fire Stations, maintained Primary and Secondary Schools and Country Parks.

For aspects of energy that go beyond WCC buildings, such as local area energy generation and community engagement in energy issues, the Council has an important influencing role

which will be developed in collaboration with partners, primarily through the Sustainable Futures Strategy Action Plan or, where relevant the Delivery Plan supporting the Energy Strategy.

CO2 emissions from other key areas such as transport, biodiversity and waste are addressed in the wider Sustainable Futures Strategy, however where those areas make use of energy on the WCC estate, they are within the scope of this Energy Strategy.

Purpose of our Energy Strategy

In 2022 the Council Plan and the draft Sustainable Futures Strategy were published, both with a focus on responding to climate change and meeting net zero commitments (for our Council emissions by 2030 and for County emissions by 2050). In response, there is a need to review and align WCC's previous Energy Plans, and its longstanding work in measuring and monitoring emissions, with the new targets, standards and legislation.

The Energy Strategy draws these elements together, setting out WCC's approach to sustainable energy management for the future and how we will reduce, use, generate and measure our own energy requirements whilst also supporting Warwickshire residents and businesses. An associated Delivery Plan has also been created which identifies specific actions we will be taking to achieve our targets.

Together, these documents support the Council Plan's commitment to be a County with a sustainable future, adapting to and mitigating climate change and meeting net zero commitments, and the key Sustainable Futures Strategy themes of:

Energy: maximise decarbonisation of the energy used by the Council and identify opportunities to increase the installation of renewable technologies

Built Environment: reduce emissions from Council buildings, increase our knowledge of energy use within our assets, decarbonise our natural gas heat supply (where viable), identify opportunities to co-locate with partners, undertake further property decarbonisation feasibility studies and support additional renewable energy schemes where viable. We will also identify future fiscal and carbon savings via improvements to the fabric of our buildings and align investment in our portfolio to our Property Strategy, incorporating utilisation, service demand and estate rationalisation so we right size our built environments to our current use.

Resources and Waste: reduce waste and resource usage while supporting the necessary economic transition required to deliver net zero, improve and increase educational campaigns to encourage behaviour change around consumption, identify opportunities to use waste as a resource and work to promote the use of sustainable and reusable materials, extend product life and reduce packaging and single use plastics.

Where we are now and where do we need to get to

Using 2019 as a baseline year, it has been calculated that WCC's total carbon footprint is 18,245 tonnes of CO_2e per year. This number was calculated using actual data from our centralised estate and data estimated using standard factors for our wider owned and occupied estate, e.g., primary schools (this does not include Academy schools).

It is expected that the UK electricity grid will decarbonise over time, as more renewable projects come on stream and improvements are made. We anticipate this will result in a reduction of 5,919 tonnes of CO_2e by 2030 against our 2019/20 baseline, which will support our move to net zero by 2030.

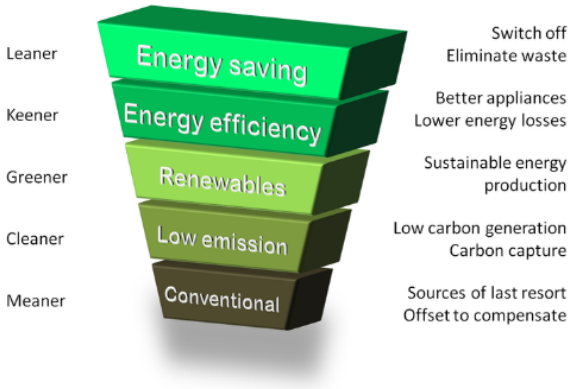
Expectations as outlined in the Sustainable Futures Strategy are that a further 9,816 tonnes' CO_2e can be achieved by a combination of insetting (i.e., carbon capture measures within WCC's boundary such as tree planting) and offsetting (measures outside of Warwickshire e.g., exporting our generated renewable energy to the UK grid, rather than using it in our own buildings). The remaining 2,510 tonnes of CO_2e will need to be decarbonised from direct measures in a number of areas including in our own buildings, or via transport and waste initiatives.

Direct decarbonisation actions in scope of this Strategy will involve reducing emissions from electricity, gas and oil use on our own estate. However, as electricity is already set to decarbonise over time a particular focus for this Strategy will be reduction of gas and oil.

Strategy Objectives

Key Themes

Following the energy hierarchy structure, and the International Standard for Energy Management (ISO50001), key areas of focus have been identified as
(NOTE diag to be re drafted by Comms Team to show 4 rows as per text below) :



- **Energy Saving** – reduce usage requirements by encouraging behaviour change, switching electrical items off, reducing heat and energy losses, constructing new builds to high standards, carrying out regular preventative maintenance and effectively managing the Council owned portfolio of assets and land
- **Energy Efficiency** – use the most efficient appliances, including building energy management systems and heat pumps and consider a fabric first approach.
- **Renewables and lower carbon generation** – supporting generation of renewable electricity, reducing our reliance on the UK grid, and being ready to make best use of developing technologies
- **Offsetting** – A plan to develop an approach to offsetting (initiatives outside of Warwickshire County Council's boundary), the options and initiatives will be developed in 2023/24.

For WCC to address the above hierarchy, we have also identified several key **supporting enablers:**

- Resourcing
  - We will identify where additional resourcing is required to deliver the objectives of the strategy. Where appropriate we will upskill or reskill colleagues to support the delivery of the strategy.
- Financing
  - We will ensure opportunities are viable and all funding routes are explored including maximising the use of the Council's Revenue Investment Fund, Capital Investment Fund and accessing third party funding.
- Procurement
  - We will use procurement, and particularly social value, as a tool to drive improvements wherever possible with our contractors and suppliers.
- Data Capture and Management
  - We will use clear data flows and associated processes to support validation of our reported numbers.
- Supportive Strategies & Programmes
  - We will work with internal and external partners to share ideas, minimise duplication and drive best outcomes to support both our residents and public sector sustainable strategy.
- Wider Networks
  - We will ensure we identify wider Warwickshire energy opportunities and influence other areas where we have a supportive role, e.g., schools. We will collaborate with other organisations and groups to foster innovation and knowledge sharing to provide recommendations to meet our 2030 and 2050 climate targets.

Key Themes

Energy Saving

- Our aim is to reduce unnecessary energy usage and conserve energy wherever possible,
- We will achieve this by:
    - ensuring that our property portfolio (of over 770 assets, including more than 2,500 buildings) is sustainably and efficiently managed;
    - consolidating utility contracts across our portfolio to improve data collection and performance monitoring (considering partner and tenant occupation).
    - embedding energy management into all decision-making, preventative maintenance and rationalising our estate to reduce our emissions;
    - carrying out detailed energy surveys on those Council-owned assets that have high emissions;
    - embedding energy considerations into regeneration schemes and development or acquisition of new assets;
    - increasing awareness and engagement with staff around energy efficiency to make building users more aware of impacts and opportunities to save;
    - using less raw materials and conserving energy to protect natural resources and reduce carbon emissions; and
- We will measure success by the reduction in energy usage (gas and electricity usage in buildings), number of energy surveys undertaken, the increased percentage coverage of energy saving measures installed across the estate, setting energy targets for new build Council assets, energy considered as part of the preventative maintenance schedule, staff training take up.

Energy Efficiency

- Our aim is to efficiently generate and use heat and electricity in our own operations (i.e., electrical, mechanical and fuel), with a particular focus on reducing gas consumption.
- We will achieve this by:
    - using the most energy efficient technologies to generate energy and heat in our buildings, wherever viable;
    - meeting compliance with statutory and future obligations and standards for energy efficiency (i.e., Energy Performance Certificates and Display Energy Certificates) and comparing energy performance for similar buildings to identify where improvements are required;
    - identifying the potential for, and impact of, retrofits on our current Property Maintenance Strategy and work programmes (recognising that this is a fundamental change to the existing strategic approach which focusses on condition-based programmes);
    - moving from heating using gas to electricity by retrofitting new technology where viable – i.e., heat pumps, ground source heat pumps, batteries and explore the potentials for hydrogen solutions; and
    - ensuring all new build properties are built to high energy standards (i.e., Statutory Standards and Building Regulations) and investigating low carbon construction methods.
- We will measure success by the reduction in electricity and gas consumption, (individual buildings and averaged), energy efficiency measures being fully embedded in the Property Maintenance Strategy and all new build projects, and the number of projects that include retrofits.

Renewables and Lower Carbon Generation

- Our aim is to support carbon avoidance or removal projects within WCC's boundaries (insetting) e.g., tree planting, generation of renewable electricity on our own assets (reducing our reliance on grid), and maximising use of our own estate for new and future technologies (e.g. energy storage and hydrogen).
- We will achieve this by:
    - confirming our ambitions and targets for renewable energy schemes, including

biomass and waste-to-heat technologies;
    - identifying opportunities to reduce reliance on the UK grid by identifying and assessing opportunities for renewable energy generation and energy storage on our own estate and wider;
    - developing a pipeline for implementing renewable technologies across our portfolio, aligned to asset investment plans;
    - confirming and progressing our commitment to working with partners to identify long-term investment opportunities to supplying our own sites with renewable energy; and
    - reviewing the potential for hydrogen ready schemes and heat networks.
- We will measure this by the increase in installed renewable capacity, increased income generated from the Government backed Smart export Guarantee scheme, and increased readiness for new lower carbon opportunities (e.g., hydrogen in place of natural gas and heat network growth).

Offsetting

- Our aim is to support the wider approach to renewables and lower carbon generation across the County to close the gap between low carbon emissions and residual emissions to reach net zero.
- We will achieve this by:
    - purchasing only green, REGO (Renewable Energy Guarantee of Origin) matched electricity for our own estate;
    - confirming our approach to long-term investment opportunities via large scale renewable sites within Warwickshire.
- We will measure this by the increase in green electricity purchased.

Strategy Delivery

The Energy Strategy has an associated delivery plan that will identify the required resources, financing and key actions needed to support the transition to net zero by 2030 (Council) and by 2050 (County).

We have identified a number of supporting enablers that will also need to be addressed to ensure the success of both the Strategy and the Delivery Plan.

Supporting Enablers [Comms to make this page more visual]

Resourcing

The Delivery Plan will identify where additional resourcing is required. We recognise that a phased approach will need to be taken due to the range and volume of objectives and the timescales involved.

Financing

The Energy Strategy will consider the financial impact that establishing a low carbon estate will have on the Council (this will include costs / benefits of energy improvements and new construction and energy installations on our own estate, as well as larger scale projects). Many of the actions in this Strategy and Delivery Plan will require revenue investment and / or capital funding, particularly for development of the pipeline of future programmes of work. This is essential to enable and support a realistic and deliverable approach for the organisation to reach net zero by 2030 and for Warwickshire by 2050.

There will be a requirement to ensure that proposals are affordable and are aligned to our Medium-Term Financial Strategy. We will ensure opportunities are viable and explore all funding routes including external funding (e.g. grants) and/or investment to enable prioritisation of costs reduction and future revenue generation.

Procurement

Procurement of services and goods from third parties is key to reducing the emissions we generate and influence. Wherever possible we will use procurement as a tool to drive improvements with our contractors and suppliers.

Data Capture and Management

Clear data flows and associated processes will support validation of our reported numbers. We will use data to track our long-term trajectory and progress, using benchmarks where possible. We will learn and continually improve our approach to energy management based on our findings.

Supportive Strategies and Programmes

Due to the complexity of energy management in a large and diverse organisation there are many links across to other Strategies and Programmes, e.g., Levelling Up and Property, Smallholdings, Commercial and Electric Vehicle Charging Infrastructure strategies. We will work with internal and external partners to share ideas, minimise duplication and optimise outcomes.

Wider Networks

We will continue to review the scope of the Strategy to ensure we include wider Warwickshire energy opportunities and the potential to influence in areas where we have a supportive or advisory role, e.g., schools. The Strategy confirms our commitment to working with Partners in supporting public sector sustainability via improved utilisation of our assets, co-locating where appropriate to reduce the public sector portfolio and focussing on investing in assets which meet our environmental standards. We will continue to work with other Local Authorities and Public Sector working groups to share learning and collaborate on joint projects.

Monitoring, Review and Governance

We will monitor our data to ensure we identify areas needing additional focus. We will report quarterly to the Sustainable Futures Board and annually to Corporate Board, via the annual Environmental Management Report as required for WCC's ISO14001 certification, and we will publish our progress externally via the annual WCC Building Energy Consumption and Emissions Review and the wider Sustainable Futures Strategy footprint. (These reports, hosted on our website, provide a record of WCC's energy performance and are useful tools in supporting public awareness and self-serve (e.g., for Freedom of Information and Environmental Information Requests)).

The supporting Delivery Plan will be refreshed annually, alongside the annual Medium Term Financial Strategy, the Integrated Delivery Plan (IDP) and other Key Performance Measures (i.e., KMBs and KBIs). The Energy Strategy will be reviewed after its first year (to ensure ongoing alignment to the agreed Sustainable Futures Strategy actions) and thereafter three yearly.

Key Roles

The Energy Strategy will be overseen and championed by several boards and working Groups.

The table below summarises the key roles that support the Energy Strategy:

Portfolio Holder for Environment, Climate and Culture	Sponsor of Energy Strategy
Resources and Fire & Rescue Service Overview and Scrutiny Committee	Monitor/ scrutinise progress of the Strategy
Corporate Board	Oversight of the Strategy and annual review of progress of the Delivery Plan
Sustainable Futures Strategy Delivery Board	Quarterly review of progress of the Delivery Plan
Director Governance and Policy	Owner of Energy Strategy
Environment and Energy Team	Responsible for coordinating the Strategy and completion of associated Delivery Plan
Project Management Delivery Teams	Ensuring the full assessment of resourcing for each strategy
Change Team	Ensuring alignment of the 'what' element of the strategy to Council's Delivery Plan

Stakeholder Groups

The Energy Strategy has been developed in conjunction with stakeholders and input from elected members including through the Resources and Fire & Rescue Service Overview & Scrutiny Committee and the Cross Council Climate Emergency Member Group and will be approved by Cabinet with the support of the Portfolio Holder for Environment, Climate and Culture.

We will continue to define our approach to wider stakeholders such as Schools and Districts & Boroughs.

Communication

A communication plan will be developed to ensure progress is visible to all.

Key Dates

Publication Date – August 2023 (post ratification by Cabinet July 2023)

Review Date – Three yearly review of Strategy (after an initial annual review) and annual review of Delivery Plan.

Appendix 1 - Glossary (PLACEHOLDER)

- Carbon dioxide equivalent (CO_2e) - measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP). Volumes of other gases are converted to the equivalent amount of carbon dioxide, to give an overall global warming potential. For example the GWP of methane is 25 times higher than that of carbon dioxide so 1 tonne of methane is equivalent to 25 tonnes of Carbon dioxide.
- Carbon insetting – action or process of compensating for carbon dioxide emissions by removing carbon dioxide out of the atmosphere using an organisation's own products / boundaries (e.g. Warwickshire). An example for WCC would be a biodiversity or tree planting scheme.
- Carbon offsetting - involves investing in projects that are not related to an organisation's products or boundary, for example purchasing carbon credits, tree planting outside its own organisation
- Energy – all energy supplied and used to enable WCC to power its estate and carry out its activities, i.e., primarily electricity and heat (via gas used in boilers to produce heating / cooling) but also that used to provide essential services, i.e., water usage and disposal of internal waste generated
- Energy storage - capture of energy produced at one time for use at a later time to reduce imbalances between energy demand and energy production. A device that stores energy is generally called an accumulator or battery.
- Fabric First - approach to building design (or retrofit) which involves maximising the performance of the components and materials that make up the building fabric itself, before considering the use of mechanical or electrical building services systems. This approach can help reduce capital and operational costs improve energy efficiency, reduce carbon emissions and reduce the need for maintenance over a building's lifetime for example passive improvements in design such insulation, triple glazing, roof insulation, draught reduction.
- Lower Carbon Energy - energy that is generated using lower amounts of carbon emissions such as, wind, solar, hydro or nuclear power but also other technologies such as heat pumps, energy storage and hydrogen).
- Net zero - state when the amount of greenhouse gas being emitted into the atmosphere is balanced by removal of the same amount out of the atmosphere.
- Renewable power – method of producing low carbon energy (e.g. energy solar, wind, biomass) which can be used to reduce consumption of electricity from the grid
- Retrofitting – installing energy efficient measures to established properties to reduce carbon footprint

Appendix 2 - Where are we now (PLACEHOLDER)

NOTE we are considering taking all the sticker/stats info and making more visual with crunchy targets from the SFS and adding to this Appendix, rather than body of Strategy. We will work this up with Comms]

- Ref to info graphics / stickers:
    - STICKER - WCC has 14 renewable assets (13 solar and 1 wind) and in 2022/23 generated 213 MWh of electricity.
    - STICKER - In 2022/23 WCC generated more than 8,000tCO2 from gas and electricity consumption in owned and occupied buildings, approximately 70% of which are emissions from natural gas usage.
    - STICKER - In 2022/23 226.2 tonnes of waste was generated by our corporate buildings

- Ref to graphics in annual Buildings Energy Report
- Ref to Annual Environment Management System report