

Equalities and Future Generations Policy Development Committee 29th September 2020

Energy Strategy 2020-2030

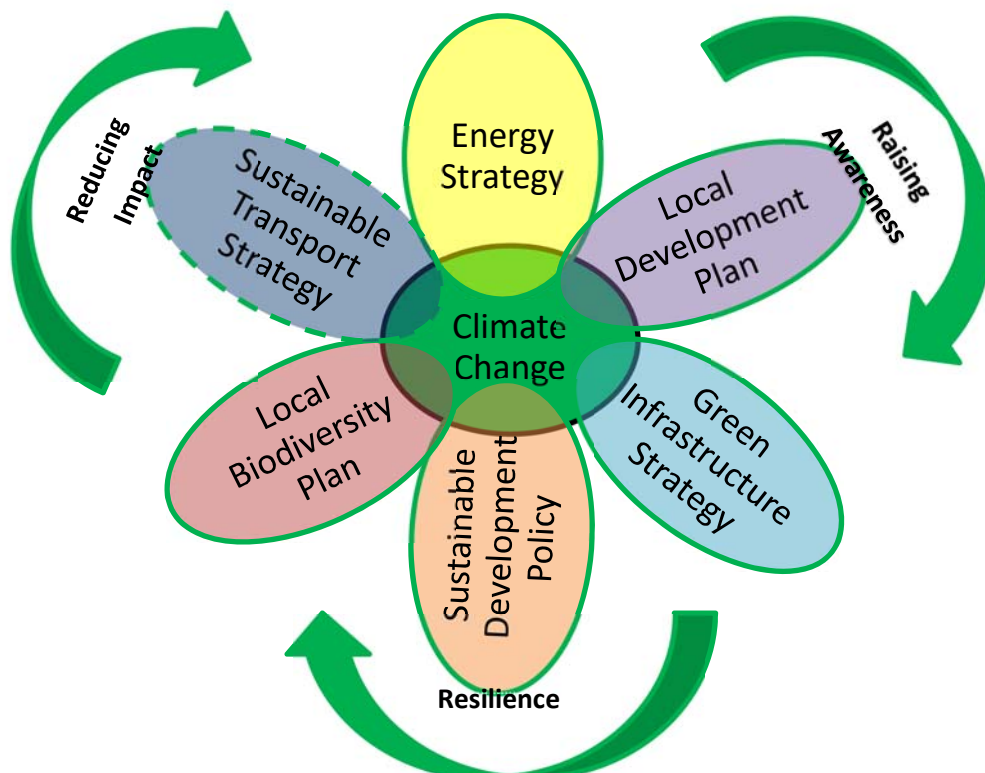
1.0 Introduction

Following presentation of the existing Energy Strategy (2016) and respective Energy & Carbon Management Plan to the Policy Development Committee on 25th February 2020, there was agreement to provide newly drafted documents to reflect the current position. This has been delayed due to the Covid 19 Pandemic. See App 1 & 3

This Energy and Carbon Management Plan will build on those existing energy saving initiatives and strategies developed from the last Energy Strategy Paper (2016), but focusing exclusively on the many aspects of energy efficiency across the Authority's owned buildings, looking at the building fabric, the building services and the management of the building (including renewable technology options). To ensure that the Plan reaches its full potential within the Authority, the establishment of the Corporate Climate Change Working Group to bring together the governance of the other six key carbon related strategies under one co-ordinated programme and meeting the aspirations of becoming a net zero carbon emissions Authority by 2030 is essential.

The Energy Strategy is one of the six key influencers for the Authority in terms of tackling the wider climate change challenge. It will impact on the main scope 1 & 2 emissions in terms of working towards a net carbon zero target in 2030.

The Six Key Influencers



Swansea Council has adopted proactive programmes to reduce its carbon emissions over a number of years; renewable projects that have been implemented and agreed to proceed represent circa 10% renewable generation of our property portfolio carbon footprint.

One key point to note is that the Energy Strategy will no longer include Highways & Transportation activity, in line with proposals at the last committee meeting. This will now be dealt with as a new strategy due to its equally strong influence on the net zero carbon target.

2.0 Achievements to Date

The Council has adopted several proactive programmes to reduce its carbon emissions over a number of years and this year despite the Covid pandemic recent achievements include:

- Since 2010 Swansea Council has been a participant under the mandatory UK-wide Carbon Reduction Commitment (CRC) Energy Efficiency Scheme reporting a carbon reduction of 23,154 t/CO₂ to the Administrator of the Scheme, Environment Agency, along with financial saving on purchase of carbon allowances of £155,676 (2018/19).
- Swansea Council procures its energy using Crown Commercial Services Framework Agreements, via the National Procurement Service (NPS), for the vast majority of supplies. All electricity procured via the NPS framework is from 100% renewable energy sources; 41% sourced from Wales (Apr 20 – Mar 21); Gas – Total Gas and Power (TGP) procured as new gas supplier (Apr 21 – Mar 22); Green Gas tariffs - dependant on viability and cost impact; pricing option available with TGP later in the year.
- Refit Low Carbon Programme - Swansea Council is participating in the Welsh Government supported Re:fit Low Carbon Programme in order to implement energy efficiency saving opportunities in non-domestic buildings. A £1.3 million interest free loan has been secured from Welsh Government Wales Funding Programme (Salix) to deliver a Re:fit Cymru (Energy Efficiency) Phase 1 project comprising over 18 buildings which is projected to save an estimated 400 tCO₂e every year. Quantifying the energy savings delivered by the Energy Conservation Measures (ECMs) will be validated using the Measurement and Verification (M&V) process.
- Solar Farm Projects - Collaborating with Welsh Government Energy Services on model size scenarios and financial appraisal assumptions towards the development of a 3MW Ground Mounted Solar PV farm. The projected finance model is currently being evaluated, it is predicted over the asset lifespan (35 years; assuming no downtime) that 101,302,731 kWh of renewable energy will be generated or 3,189,600 kWh/year (projected as the electricity generated by a PV module decreases over time), equating to 688 t/CO₂ year. This represents 3.6% renewable generation against 2019/20 carbon emissions of 18,757 t/CO₂.

- Progressing work towards a world-leading Swansea Bay Tidal Lagoon, estimated electricity generation of 504,854 MWh, equating to carbon emission savings of 94,913 mT CO₂e.
- Swansea Council has been working in collaboration with Egni Co-op and has recently (Sept 20) successfully installed 220kW of rooftop Solar PV on three comprehensive schools Pentrehafod, Gowerton and Pontardulais

3.0 Delivering a Carbon Neutral Estate by 2030

The Energy and Carbon Management Plan provides a co-ordinated approach which will identify and analyse energy and carbon emissions from the delivery of the Authority's operational service deliveries and will

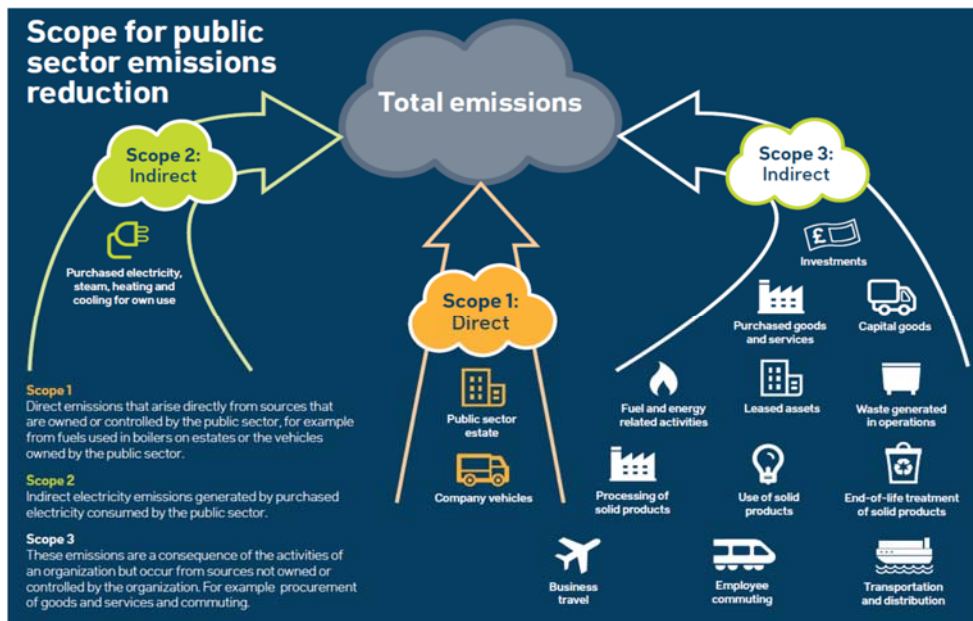
- Provide an overarching programme that will align and integrate all legislations and policies that relate to energy, carbon management and climate change
- Clearly define Swansea Council strategic ambition and intent for addressing energy and carbon management
- Quantify the Authority's baseline carbon emissions from its service property activities.
- Identify and evaluate energy saving projects towards reducing energy costs
- Be adaptable to the new Welsh Government Net Zero Carbon Reporting requirements, publication delayed due to COVID-19.
- Adopt a low carbon / renewable technology way of working, reducing the dependency on conventional energy supplies.

4.1 Reporting of Emissions

Measuring our performance is essential; 'we cannot manage something we cannot measure'. It is important to define our methodology and scope for calculating our carbon footprint, to ensure consistent measurement. Our approach to measuring is based on the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol).

The Authority contributes to climate change directly, such as emissions from its owned buildings (inclusive of schools); and indirectly, through emissions associated its demand for goods and services. These emissions are categorised as 'scopes' in the Greenhouse Gas Protocol (GHG Protocol).

It is anticipated that the Welsh Government reporting requirements will follow this route. Reporting of carbon emissions falls within three scopes as illustrated in the diagram



Scope 1 and Scope 2 cover carbon emissions that are presently measured by the Council

- Scope 1: Non-domestic buildings;
- Scope 1: Street lighting;
- Scope 1: Fleet mileage; and,
- Scope 1: Business mileage.
- Scope 2: Indirect emissions

Scope 3 This covers carbon emissions not controlled or owned by the authority and only has powers of influence/ support / engagement to seek the necessary changes and needs to be divided into two elements:

- The authority's own work and the wider economy, for example engaging with procurement covering environmental impacts as part of contract of services; housing (i.e. sustainability); collaborating with Welsh Government / working with other public sector organisations (Swansea University / Health Service).
- The second element of this strategy is to work with everyone else to achieve a significant Swansea change area wide, for example engaging with Low Carbon Swansea Bay & Swansea Environmental Forum / private sector

The Welsh Government are developing a Welsh Public Sector Net Zero Carbon Reporting Guide, publication delayed due to COVID 19 which will provide greater clarity on reporting requirements under Scope 3.

4.2 Carbon Footprint – Non Domestic

The dataset table below contains baseline sources of energy demand and supply to City and Council of Swansea non domestic buildings and the associated carbon emissions, excluding transport and street lighting. The Council spends in-excess of £7m annually on energy for its non-domestic buildings.

The table below shows a breakdown of energy consumption, cost and carbon emissions from operational service areas during 2019/20.

| | kWh | £ | t/CO ₂ |
|--------------------|-------------------|-------------------|-------------------|
| Electricity | 25,435,260 | £5,068,418 | 6,997 |
| Gas | 64,081,124 | £2,073,459 | 11,760 |
| Total | 89,516,384 | £7,141,877 | 18,757 |

5.0 Next Steps

Implementation of the Energy and Carbon Management Action Plan will assist the Authority to significantly move forwards towards reducing its carbon emissions by 2030 from across its property portfolio, in addition to improving the built environment and ensuring a consistent and standard method for considering implementation of renewable technology systems across the authority's assets. However, this will require commitment (Including the allocation of funding) and support of Cabinet Members; Heads of Services and Officers in its delivery. The views of the PDC are welcome as to any changes or additional actions required as part of the new strategy, prior to formal approval.

6.0 Financial Implications

There are no financial implications associated with this report.

7.0 Legal Implications

There are no legal implications associated with this report.

8.0 Equality Implications

See attached EIA (App 3)

Appendices

Appendix 1 – Draft Swansea Council Energy and Carbon Management Plan Framework 2020 to 2030

Appendix 2 - Swansea Council: The Energy and Carbon Management Strategy Action Plan (2020 – 2030)

Appendix 3 – EIA Screening Form