

ITEM No ...4.....

REPORT TO: POLICY AND RESOURCES COMMITTEE – 11 JANUARY 2016
REPORT ON: SUSTAINABLE ENERGY AND CLIMATE ACTION PLAN FOR DUNDEE
REPORT BY: CHIEF EXECUTIVE
REPORT NO: 5-2016

1. PURPOSE OF REPORT

- 1.1 This report proposes the development of a Sustainable Energy and Climate Action Plan (SEAP) for Dundee with the aim of reducing carbon emissions across the city by 40% by 2030 and increasing resilience to the impacts of climate change.

2. RECOMMENDATIONS

- 2.1 The Committee is asked to:
- a) approve the proposal to sign up to the EU Covenant of Mayors (CoM)
 - b) agree to develop a city-wide Sustainable Energy and Climate Action Plan (SEAP) via the Dundee Partnership Environment Steering Group

3. FINANCIAL IMPLICATIONS

- 3.1 Costs associated with strategy development will be contained within existing budgets and from in-kind partner support. The Council is currently working with Resource Efficient Scotland to explore appropriate external funding streams related to the scenario modelling element of the strategy development.

4. BACKGROUND

4.1 EU Covenant of Mayors

- 4.1.1 After the adoption of the EU Climate and Energy Package in 2008, the European Commission set up the Covenant of Mayors (CoM) to support local and regional authorities in their efforts to implement sustainable energy strategies. By endorsing local activities, the CoM's main purpose is to contribute to achieving and going beyond the EU's emission reduction and energy efficiency targets.

- 4.1.2 Since its launch, more than 6,500 European municipalities have become signatories. In Scotland, the CoM has already been signed by Aberdeenshire Council, Aberdeen City Council, Edinburgh City Council, Glasgow City Council, Dumfries and Galloway and North Ayrshire Council, with COSLA acting as official 'Covenant Supporter'.

- 4.1.3 On 15th October 2015, a new CoM was launched that features a new target for signatories of at **least 40% reduction in CO₂ emissions by 2030** and includes both the mitigation and adaptation pillars through the integration of the Covenant of Mayors and Mayors Adapt programmes as well as further strengthening the synergies with other relevant EU initiatives (e.g. Smart Cities and resilient communities).

4.2 Sustainable Energy and Climate Action Plans

- 4.2.1 By signing up to the CoM, a local authority commits to producing a Sustainable Energy and Climate Action Plan (SEAP) within two years, setting out an emissions baseline and the initiatives showing how reductions in carbon will be met. A feature of the new CoM for 2015 will also be to prepare a 'Climate Change Risk and Vulnerability Assessment'. Reports on progress are then made to the CoM every two years. Taking part in the programme would allow the Council to benefit from EU funding schemes and share best practice.

- 4.2.2 Many cities are developing energy action plans in response to growing concerns over climate change, energy security and the impacts from the increasing costs of energy.¹ In addition, legislation in this area is increasing, with specific requirements and implications for local authorities (for example the Scottish Government has recently approved the mandatory reporting of carbon emissions for the public sector due in 2016).

5 BUSINESS NEED

- 5.1 Dundee will face many challenges in the move to a low carbon future. However these can also present opportunities for new and innovative solutions in energy, low carbon and adapting to the impacts of climate change. A particular issue for Dundee is 'energy retrofitting' existing buildings. New solutions will be needed for these buildings and for the large number "hard to treat" homes. The city has opportunities to look at generating energy locally through renewables as well as the use of district heating schemes and combined heat and power. The challenge will be in taking these bigger infrastructure projects forward and accessing the necessary technical expertise and funding programmes.

- 5.2 The SEAP would build on existing projects by outlining a city-wide vision for strategic energy generation and consumption. There has been considerable work already in this area by the Council and public sector partners. The challenge will be to scale this work to a level that makes significant reductions in carbon emissions and accelerates change across the city.

- 5.3 The proposed SEAP fully aligns with existing commitments, including:

- *Single Outcome Agreement 2012-2017* - one of the key outcomes for the City's SOA is that "Our People will live in a low carbon, sustainable city" with key intermediate outcomes including supporting the transition to a low carbon economy; adapting to the effects climate change; and ensuring that Dundee has an accessible, integrated and sustainable travel network
- *Carbon Management Plan* - Dundee City Council's Carbon Management Plan aims to reduce carbon emissions from its own properties by 5% each year until 2020. Participating in the CoM reinforces this aim and the SEAP can be formed from activity included in the Carbon Management Plan
- *Renewables Development* - the city is keen to develop a renewable energy sector, with a focus on wind turbine manufacture and support and is ideally placed to benefit from this type of activity
- *Public transport improvements* - the city is looking at ways of addressing carbon reduction through enhanced use of public transport and encouraging ultra-low emissions vehicles
- *Reduce environmental impacts* - alongside public transport improvements the City Council is looking at ways of reducing environmental impacts to meet the targets set in the Scotland's Climate Change Declaration/Mandatory Reporting and the City Council's Carbon Management Plan

5.4 Benefits

- 5.4.1 The benefits of having an energy plan include not just compliance with legislation but also lower energy costs, more energy efficiency and a wide range of social and economic benefits. Alleviating fuel poverty is a key driver of the plan which can in turn have direct health benefits. Energy projects may lead to the development of new skills, apprenticeships and job opportunities. There may be potential for new supply chains and markets in energy and low carbon goods and services. An integrated plan would be an asset in promoting the city to new investors and promoting its green credentials as a leading authority in sustainable energy.

- 5.4.2 An integrated plan will provide the leadership, commitment and planning necessary for the transition to a low carbon Dundee in line with the Single Outcome Agreement. It provides an

¹ Aberdeen, Edinburgh and Glasgow City Councils all have energy action plans

opportunity for engagement with various stakeholders and allows the public and private sectors to become directly involved in energy planning for the city.

5.4.3 Finally, the SEAP provides a single integrated energy plan co-ordinating an increasing number of disparate energy initiatives across the Council. The programme should enable the development of projects that will not only meet a range of Council objectives but also realise financial savings. This contributes to major programmes going forward such as Changing for the Future. These savings will also reduce energy bills directly and reduce carbon taxes and therefore assist with budget constraints.

5.4.4 The SEAP will help deliver the following strategic benefits:

- Alleviation of fuel poverty through reduction in energy consumption reduction and energy efficiency measures – resulting in the reduction of utility bills. This aligns with work already being undertaken by the Energy Management Team and through the Local Housing Strategy
- Potential for energy security through energy saving and local energy production
- Attraction of investment and opportunities to access national and European funding related to the topic area. It is likely that certain EU programmes (e.g. Smart Cities) will begin to prioritise those cities that have signed up to the CoM
- Creation of jobs
- Synergies between existing and future commitments and policies
- Improved connectivity as per the requirements of a Smart City
- Improved urban mobility aligning with our Local Transport Strategy
- Reduced levels of air pollution aligning with our Air Quality Action Plan
- Development of infrastructure that reduces reliance on individual vehicles and increases mobile working and digital connectivity
- Improved health and wellbeing, reducing the strains placed upon care and welfare services
- Participation of wider society, demonstrating the Council's role in improving local democracy
- Political visibility and enhanced reputation
- Contribution to the global fight against climate change and to Scotland's emission reduction targets, demonstrating commitment to environmental protection

5.5 Risks associated with failure to deliver a SEAP include:

- Increased revenue costs associated with the Carbon Reduction Commitment Energy Efficiency Scheme.
- Impact on business continuity.
- Potential economic impacts associated with not taking precautionary measures on energy security.
- Increased revenue costs associated with rising utility, fuel and labour costs. (The latter being of relevance due to greater requirements for more services such as emergency response, maintenance etc).
- Increased instances of poor health and wellbeing associated with unsatisfactory air quality and living within fuel poverty, having a direct impact upon care services and the NHS.
- Failure to comply with applicable environmental legislation as well as non-compliance with the Climate Change (Scotland) Act 2009 and associated Public Bodies Duties.

- Failure to comply with multiple Council strategies, policies and plans. There may be other documents that individually ensure strategic requirements are met, however there is no umbrella document that oversees emissions reduction.

6 THE SUSTAINABLE ENERGY AND CLIMATE CHANGE ACTION PLAN (SEAP)

6.1 The proposal is to produce a draft SEAP by end of December 2016 which aligns to other strategies currently being implemented, including but not limited to Smarter Cities and the implementation of energy, transport and waste plans. The SEAP is not specific to the Council, but encompasses all activities across Dundee City; having a far broader scope than the Council's existing carbon management plan. As such, a key objective of the SEAP is to work collaboratively with a range of stakeholders via the Dundee Partnership. The participation of the public, private and community sectors across the city will be crucial in developing new initiatives and galvanising action.

6.2 Through discussions and a workshop on the potential for a SEAP, members of the Dundee Partnership Environment Steering Group were in clear agreement that energy continues to affect all sectors in the city with the growing cost of energy having real impacts. There is a great deal of support from partners for the principles and aim of the SEAP, in particular in developing projects and initiatives (particularly around the potential for District Heating) and this positive interest will be built upon.

6.3 There would be three elements to developing the SEAP:

6.4 1 The Strategy (2016-2030)

6.4.1 The Strategy would set out the challenges and opportunities, targets, vision and outcomes, governance arrangements, routemap to 2030, strategic programme areas, measuring progress and reporting.

6.4.2 There are six proposed Strategic Programme Areas which combine to form a single integrated plan. These work programmes reflect the priorities of the SEAP to maximise carbon reduction across sectors:



6.5 2 Baseline Review and Emission Inventory

6.5.1 The purpose of the baseline review is to establish a clear picture of 'where we are', a description of the city's current situation in terms of energy and climate change that will directly inform the development of the strategy.

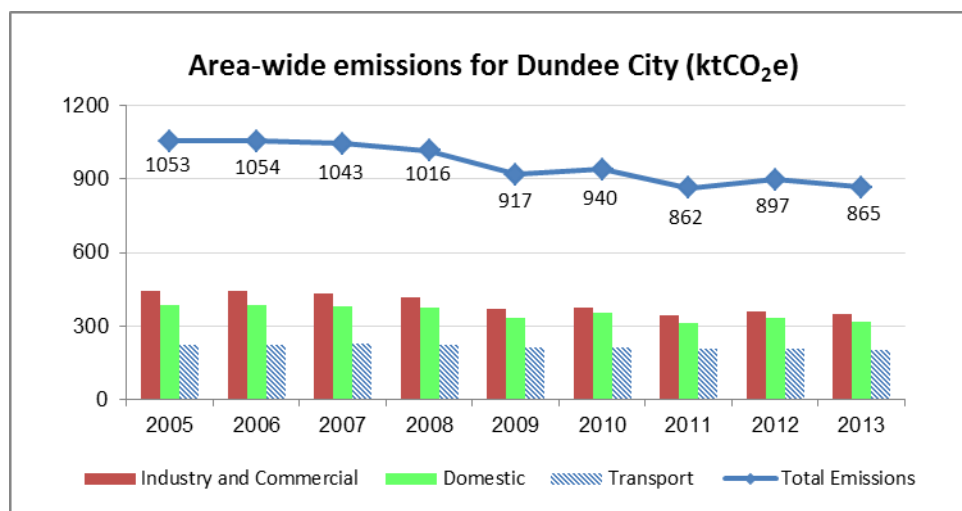
6.5.2 Energy consumption and CO₂ emissions at the local level are dependent on many factors: economic structure (industry/service oriented and nature of the activities), level of economic activity, population, density, characteristics of the building stock, usage and level of development of the various transport modes, citizens' attitudes, climate etc. Some factors can be influenced in the short term (like citizens' attitudes), while others can only be influenced in the medium or long term (energy performance of the building stock). It is useful to understand the influence of these parameters, how they vary in time, and identify upon which partners can act (in the short, medium and long term).

6.5.3 The collation of a Baseline Emission Inventory (BEI) is a prerequisite to SEAP elaboration as it identifies and quantifies the principal sources of CO₂ emissions and their respective reduction potentials. It is a resource intensive part of SEAP development and would benefit from academic input. Where possible, the BEI should take into consideration the energy consumed in the following sectors:

- municipal buildings, equipment/facilities
- tertiary (non municipal) buildings, equipment/facilities
- residential buildings
- transport

6.5.4 The CoM requires signatories to reduce their carbon emissions by 40% by 2030. CoM guidance suggests that an organisation can select the closest year for which comprehensive data has been collected. In the UK, the Department of Energy and Climate Change (DECC) has been providing a consistent data set for each local authority since 2005. This information is provided every year but with a two year lag.

6.5.5 The latest DECC data released in July 2015 indicates that between 2005 and 2013, emissions in Dundee reduced by nearly 15%, meaning that a further reduction of approximately 25% will require to be achieved by 2030. The graph below provides DECC data showing the carbon emissions by fuel type and sector.



6.5.6 Reducing carbon emissions will mean tackling energy efficiency in both domestic and non-domestic buildings, increasing the amount of renewable energy and addressing sustainable transport.





6.6 3 The Implementation Plan (2016-2021)



6.6.1 The proposed approach to develop the SEAP is to build momentum with a programme of actions. As well as direct actions to reduce carbon emissions, this will require enabling actions to be put in place including the tools, policies and measures to support reduction e.g. the role of planning, use of heat maps, carbon assessment tools, new policy requirements and supporting legislative frameworks.

6.6.2 The Implementation Plan would set out specific actions for the city, taking into account partner priorities, existing projects and national initiatives. Three categories of action would be:

- Direct: (measures that will directly reduce emissions/embed resilience)
- Enabling: (measures to support the delivery of direct actions)
- Delivery: (measures that will implement the SEAP)

6.6.3 Possible actions for consideration include:

<p>Energy Efficiency</p> 	<p>Programme likely to achieve greatest reduction in emissions, with focus on existing buildings. Possible actions may include: developing a major energy retrofit programme for non domestic buildings to be rolled out city wide; working with the largest employers to set targets for energy reduction; working with Commercial Property owners to reduce carbon; continuing with initiatives to reduce energy in homes and construct new energy efficient ones; develop a smart energy business district; implementing new technologies for monitoring energy in buildings and retrofitting street and stair lights. Behaviour change is likely to be an important component of this programme.</p>
<p>District Heating</p> 	<p>A key objective of the SEAP is to decentralise energy and tackle fuel poverty. This programme aims to increase the use of district heating in the city, evaluating the potential for expanding existing schemes. Activities will focus on the opportunities to create new heat networks across the city providing locally generated heat for non-domestic, residential and commercial properties. Possible actions may include: District Heating Delivery Plan, heat map opportunity assessment; guidance for developers; working with partners to take forward major schemes including Ninewells/Menziesshill, Baldovie/Whitfield, City Centre and Coldsides. Each energy project will require a feasibility study with detailed costings and be brought back to future Policy and Resources Committee.</p>
<p>Renewables</p> 	<p>The renewables programme aims to increase the use of renewables in both the domestic and non-domestic sectors and encourage innovation in adopting new technologies. Possible actions may include: publishing a new policy on renewables; in pilot ground source heat pumps in parks; assessing the potential for renewables in the public sector estate; providing new guidance for community groups and householders; assessing opportunities for a number of specific renewables projects such as biodiesel, solar P.V. and microhydro.</p>
<p>Resource Efficiency</p> 	<p>The inefficient use of resources causes carbon emissions. This programme would encourage resource efficiency across the city with businesses and consumers. Possible actions may include: progressing the Zero Waste projects and evaluating opportunities for capturing waste heat and power; promoting the Resource Efficient Scotland advisory and support service; engaging with organisations involved in reuse and repair activities in the city and working in partnership with Scottish Water piloting waste heat from sewage pipes.</p>

<p>Sustainable Transport</p> 	<p>The programme on transport will support Local and Regional Transport Strategies, aiming to reduce the need to travel, encourage active travel and decarbonising travel. Possible actions may include: integration of smart travel/integrated ticketing; behaviour change programme; building on success of electric vehicle and infrastructure investment to grow Dundee's reputation in the adoption of Ultra Low Emission Vehicles; investigate ESCO model to reduce barriers to ULEV fleet investment; promotion of Active Travel; working with the City Car Club.</p>
<p>Resilience</p> 	<p>The new CoM 2015 includes a commitment to strengthening resilience and capacity to adapt to adverse climate change impacts. Key to this will be preparing a 'Climate Change Risk and Vulnerability Assessment'. Public sector bodies in Dundee are already working with Adaptation Scotland on these issues and the challenge will be progressively mainstream adaptation considerations into relevant policies, strategies and plans.</p>

- 6.6.4 Meeting the target will be challenging and, as far as possible, actions in the SEAP will be quantified in terms of their carbon reduction. For some initiatives, further development of business cases and more detailed project plans will be required to provide a better measurement of carbon impact. For others, the scale is likely to be the crucial factor and consequently only best estimates may be only provided. Resource Efficient Scotland has developed a 'Carbon Footprint and Project Register Tool' to support organisations looking to establish current and future carbon footprints, develop project registers and carry out target setting. The intention will be to use this tool for the SEAP to enable carbon reduction from projects to be more robustly assessed.
- 6.6.5 There are a number of other external factors that will impact positively on the SEAP target and the rate of reduction. These include EU Directives, national policies, and UK and Scottish government initiatives on issues such as emissions standards for vehicles, biofuels, buildings standards and new energy efficiency requirements. A key factor will be grid decarbonisation of the electricity supply where energy from fossil fuels is replaced with renewables.

7. **POLICY IMPLICATIONS**

- 7.1 This report has been screened for any policy implications in respect of Sustainability, Strategic Environmental Assessment, Anti-Poverty, Equality Impact Assessment and Risk Management. There are no issues in this regard to report on.

8. **CONSULTATIONS**

The Council's Management Team have been consulted in the preparation of this report.

9. **BACKGROUND PAPERS**

None.

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..... 30/12/2015