ITEM No …5…

REPORT TO: **POLICY AND RESOURCES COMMITTEE – 24 JUNE 2019**

REPORT ON: **CLIMATE CHANGE – PROGRESS REPORT AND NEXT STEPS**

REPORT BY: **EXECUTIVE DIRECTOR OF CITY DEVELOPMENT**

REPORT NO: **207-2019**

1 PURPOSE OF REPORT

1.1 To inform Committee of the recent recommendations made by the UK Committee on Climate Change and subsequent decision by the Scottish Government to amend the Scottish Climate Change Bill that will set a target of net-zero greenhouse gas emissions for Scotland by 2045. The report also highlights the preparation of a consultative draft Sustainable Energy and Climate Action Plan (SECAP) for Dundee that will represent the city's response to tackling climate change.

2 RECOMMENDATION

2.1 It is recommended that the Committee:

a notes the Scottish Government's proposed changes to the Climate Change Bill that will require local authorities to act in accordance with increased targets for reducing climate-changing emissions;

b remit the Executive Director of City Development to finalise the consultative draft SECAP, carry out a period of public consultation and report back within six months with a finalised plan;

c request that the Chair of the Dundee Partnership write to city partners to seek their commitment to the delivery of the SECAP;

d notes that the Council has agreed to develop a carbon budget and that the Executive Director of City Development and Executive Director of Corporate Services will bring back a report to Committee in 2020 recommending a way forward and highlighting resources required.

3 FINANCIAL IMPLICATIONS

3.1 The successful delivery of the SECAP will depend on appropriate levels of funding and resources being in place. It is stressed that actions within the plan will likely represent a mix of committed and desired interventions across stakeholders with many actions already having funding committed, whilst others will require feasibility studies or business cases in the first instance to determine their viability and funding subsequently secured to make them happen. Significant additional investment will be needed for projects if the Council follows a net-zero greenhouse gas emissions reduction target. Potential sources of funding will continue to be explored through existing avenues as well any innovative approaches to ensuring projects can be delivered.

4 BACKGROUND

4.1 In October 2018, the International Panel on Climate Change (IPCC) published its Special Report on Global Warming of 1.5°C, concluding that there is less than 12 years to act to avoid the worst impacts of climate change. The report describes the enormous harm that a 2°C rise is likely to cause compared to a 1.5°C rise and informed that limiting Global Warming to 1.5°C

may still be possible, with ambitious action from national and sub-national authorities, civil society, the private sector, indigenous peoples and local communities.

4.2 On 2 May 2019, The UK Committee on Climate Change published a landmark report (Net Zero: The UK's contribution to global warming) which recommend that a 100% reduction in greenhouse gas emissions should be legislated by the UK Government "as soon as possible". Such a target would constitute the UK's "highest possible ambition" to combatting climate change and would "send a much stronger signal internationally". The report states that this net-zero target could be achieved at the same cost that is currently put against achieving the current Climate Change Act, which is between 1-2% of GDP in 2050.

4.3 On the same day, the Scottish Government announced plans to amend its Climate Change Bill and commit to a legally binding target of reaching net-zero greenhouse gas emissions by 2045 at the latest which would see Scotland become carbon neutral by 2040.

4.4 Concurrent with these reports and political commitments, there has been a groundswell of public concern and global activism on climate change and an increasing focus on broader sustainability aims, for example through the UN Sustainable Development Goals. Other Scottish local authorities, including City of Edinburgh Council, Glasgow City Council, West Dunbartonshire Council and Highlands Council have responded to the IPCC report and public calls for action by declaring a Climate Emergency and setting targets and action plans to reduce greenhouse gas emissions.

4.5 Many of the components needed to reach net-zero greenhouse gas emissions include switching to low-carbon electricity, efficient buildings, low-carbon heating, electric vehicles, carbon capture and storage, diversion of biodegradable waste from landfill, phase-out of fluorinated gases, increased afforestation and measures to reduce emissions on farms.

4.6 It is recognised that Dundee is a net-importer of energy and therefore its ability to achieve net-zero greenhouse gas emissions will rely heavily on outside national influences, most importantly, the continued decarbonisation of the electricity supply grid where energy from fossil fuels is replaced with renewables. Nevertheless, Dundee City Council has an important local leadership role in taking action to transition to the use low or zero carbon sources of energy as well as influencing local organisations, businesses and communities to do likewise.

4.7 Terminologies

4.7.1 Net-zero greenhouse gas emissions are achieved when anthropogenic (i.e. as a result of human activity) emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. The three main greenhouses gases are Carbon Dioxide (CO_2), Methane (CH_4) and Nitrous Oxide (N_2O). Carbon neutrality is achieved when the balance is reached for carbon dioxide emissions only.

4.7.2 The term CO_2 equivalent (CO_2e) emissions is a commonly used way of presenting total greenhouse gas emissions as an equivalent amount of CO_2. Most typically, the CO_2e emission is obtained by multiplying the emission of a greenhouse gas by its global warming potential (GWP) for a 100-year time horizon.

5 TAKING CITY-WIDE ACTION ON CLIMATE CHANGE

5.1 It is widely recognised that there is a climate emergency and cities have a key leadership role to play in reducing greenhouse gases and building resilience to the unavoidable impacts of a changing climate.

5.2 In common with other cities, Dundee faces challenges in responding to the energy, transport and infrastructure requirements arising from growth in a sustainable way. To do this, Dundee will need to achieve an absolute decoupling of emissions from economic growth, whereby

emissions reduce whilst still supporting sustainable economic growth. This goal, will require the successful implementation of significant interventions.

5.3 Dundee has already shown significant leadership in tackling climate change. In March 2018, the Lord Provost and Leader of Dundee City Council, signed the Covenant of Mayors for Climate and Energy, a global initiative that brings together local governments in a voluntary commitment to reducing greenhouse gas emissions by at least 40% by 2030 and develop a SECAP that adopts a joint approach to tackling climate change mitigation and adaptation.

5.4 Dundee's consultative draft SECAP is in the final stages of preparation and is the culmination of a years' worth of collaborative work, led by the Council and co-designed with public, private and community organisations, recognising the fact that a concerted city-wide effort is required to achieve this level of impact. It represents the first set of actions in a long-term pathway to reducing greenhouse gas emissions in Dundee. It is recognised that to achieve a net-zero greenhouse gas emissions target, local interventions will be required, alongside significant additional measures in order that Dundee benefits from the effects of future national policies.

5.5 Preparatory work has been carried out to assess Dundee's greenhouse gas emissions as well as preparing a Climate Risk & Vulnerability Assessment. This has resulted in working with partners to agree the SECAP's long-term vision, priorities and actions to help meet objectives across four programme areas of Energy, Mobility, Waste and Resilience.

5.6 Considerable work has already been carried out across the city by the Council and partners and future actions have been proposed within the draft SECAP:

a <u>Energy - Domestic</u>

- By 2015, all Council housing stock reached required energy ratings, via replacement of all electric storage heating with gas central heating and ensuring all suitable properties had appropriate insulation.

- 3,500 hard-to-treat properties (Council and private) have had external wall insulation fitted, reducing carbon emissions. The Energy Savings Trust estimate that a typical semi-detached house could save £260 per annum and over one tonne of CO_2e per annum from external wall insulation. This would equate to potential savings of £910,000 and 3,500 tonnes of CO_2e for these properties, however this is very much dependent on how residents use their heating. A further 1,300 properties will be completed by the end of 2019.

- On-going installation of photovoltaic panels installed on multi-story developments.

b <u>Energy - Non-Domestic</u>

- Energy Performance Contracting model being utilised to invest £1.7m in the installation of energy efficiency measures in eight properties initially. This is guaranteed to achieve savings of at least £222,000 per annum and a further 1,000 tonnes of CO_2e. Non-Domestic buildings involved in these initial energy efficiency improvements include Olympia Leisure Centre, Dundee Contemporary Arts and the Ice Arena. The long term plan is to include more than 100 Council properties.

- In 2017/18, their first full year of operation, the three solar arrays at Claverhouse, The Crescent and DISC generated 98,400 kilowatt hours of renewable energy with approximate savings of 50 tonnes of CO_2e.

c <u>Street Lighting</u>

- In 2012/13, the Council's street lighting accounted for 6,145 tonnes of CO_2e. In the same year a programme commenced to install 5,000 LED street lights that have reduced emissions to 3,270 tonnes of CO_2e, a reduction of 46%. By 2020, a further £4.8m will have been invested to complete the programme of converting all possible streetlights to LED. This will significantly reduce running costs and is estimated to reduce emissions from street lighting to 1,809 tonnes CO_2e emissions, resulting in a total approximate saving of 70% since 2012/13.

d Renewables

- Renewable technologies, in particular photovoltaics, have been included in the design of new build schools. Sidlaw View, Tayview, Coldside and the North East Campus, alongside three systems at DISC, Claverhouse and the Crescent. Further plans include a rolling programme of photovoltaic installation, covering all Council buildings.

- The V&A Museum of Design building runs solely on geothermal energy and aims to achieve BREEAM (Building Research Establishment Environmental Assessment Method) Excellent category as a measure of sustainability. Design includes thirty, 200-metre deep bore holes for heating and cooling of the building along with air source heat pumps on the roof. This form of renewable energy provides the building with 800,000 kWh/annum of heating and 500,000 kWh/annum of cooling.

- Dundee is supporting the Scottish Cities Alliance in the creation of a hydrogen economy in Scotland by developing an Integrated Energy Park (combining heat, power and transportation) and with a focus on hydrogen fuel. Replacing diesel with hydrogen as a fuel source in buses will result in better air quality, improved health, reduced noise levels and lower carbon emissions as well as providing the capacity for longer transport distances compared to electricity.

e District Heating

- The Council secured £3m funding from the Scottish Government's Low Carbon Infrastructure Transition Programme (LCITP) together with £3m capital investment to develop an innovative Low Carbon District Energy Hub at Caird Park Regional Performance Centre for Sport (RPCS). This multi-technology energy centre design combines heat pumps, gas Combined Heat & Power (CHP), solar thermal, photovoltaics, and large thermal stores combined with gas boilers for peak demand and backup. By delivering a low carbon solution, the Energy Hub will be capable of generating 100% of its electrical demand and provide 85% of the site's heat demand from renewables with a reduction in carbon emissions of at least 536 tonnes of CO_2e per annum. It has been designed in such a way to have future capacity to feed housing adjacent to the site.

- The Council were successful in an additional LCITP bid in 2018 to develop an investment-ready business case for the Dighty Corridor project. This long-term project would link the waste to energy facility at Baldovie to the Low Carbon District Energy Hub at the RPCS, creating and energy corridor along the line of the Dighty Burn. Connections would then be taken from this main network pipe to serve homes in Douglas, Mid Craigie, Linlathen, Fintry and Whitfield.

f Mobility

- In line with the Dundee Cycling Strategy 2016, cycle paths are being systematically upgraded and extended where feasible; alongside changes in policy and promotion, this will enable more people to cycle more often.

- In July 2018, Dundee was successful in the first phase of Sustrans Scotland's "Community Links PLUS" design competition. This has provided funding to undertake engagement and design work during 2019, which will look at improving cycling and walking routes from communities in the north-west and north-east of Dundee into the city centre.

- Active travel is supported and promoted through a number of initiatives, including Walk Once a Week (WOW), Pedal to the Pool, Get on the Go and Safer Routes.

- A new Waterfront Active Travel Hub is to be developed by 2020. The Hub will feature a bike repair/rental shop, with operators responsible for providing information and taster sessions on all forms of sustainable transport within the city including EVs, car clubs, walking groups and cycle routes.

- Mobility Innovation Living Laboratory project (MILL), a public-private-people partnership led by Urban Foresight, strives to introduce shared mobility solutions that integrate with the transport network based on initiatives tested in the real world, namely Dundee city centre, under the banner ShareMORE (Shared Mobility and Resource Efficiency). This will include projects that will improve the efficiency of parking infrastructure, implement easy to access cycle hire schemes, enhance public transport information and accessibility as well as encourage shared use of assets to reduce the number of vehicles on the road.

- Dundee has one of the highest concentration of Battery Electric Vehicles of any city in the UK with the Councils internal fleet having the most EVs of any local authority in the UK. This is supported by a network of 80 public charging points across the city, many of have been installed by the Council with Scottish Government funding and provide free charging to date. From the council owned chargers alone there have been over 191,000 charging sessions, providing over 5.4 million electric miles.

g <u>Waste</u>

- Dundee City Council currently recycles 35% of household waste. Improved waste and comprehensive recycling collections have been rolled out across the city since 2012 and these services are now fully compliant with the Charter for Household Recycling in Scotland (a government initiative to bring consistency to recycling services across the country). Dundee is the first city in Scotland to achieve this and internal waste management practices are now also being aligned with the Charter.

- The Baldovie Community Reuse Hub was initially a pilot project between the Council, Tayside Re-Users, Transform and Dundee Social Enterprise Network. Items are saved from the skip and repaired, reducing waste. Since September 2015, approximately 135,000kg of goods have been recovered. A new partner has now been sought to take forward the good work achieved through the pilot project.

- WARPit (Waste Action Re-Use Portal) is an online tool that makes it easy for organisations in Dundee to locate and obtain surplus resources, (such as furniture, office consumables, electrical items, fixtures and fittings, books and technical equipment) thereby reducing procurement spend and waste disposal costs, as well as minimising waste and reducing associated carbon emissions. Since launching in 2014, Dundee City Council's use of WARPit has saved over £320,000 in item replacement, waste disposal and procurement costs; 154 tonnes of CO_2e and 53 tonnes in waste disposal. Items totalling almost £69,000 have been donated to local charities.

- In September 2017, Dundee City Council, together with local businesses, schools, community groups and organisations came together to take a city-wide preventative

approach to tackling litter and be the first to sign up to Zero Waste Scotland's Litter Prevention Action Plans initiative. Two events have since been held with the pilot group, to first create the plan and then a follow up to tackle specific actions and support other interested organisations.

- Since the Take Pride in Your City campaign began in May 2015, 129 clean-up events registered with Neighbourhood Services and/or Clean Up Scotland have taken place, with more scheduled for this year. Many more clean up events take place throughout Dundee which are not registered with the Council.

h Resilience

- The £13.5m Broughty Ferry Flood Protection scheme is currently at detailed design stage and will see the construction of a new setback wall and gates along with a four meter wide combined cycle walkway running from Douglas Terrace to Broughty Castle. This scheme will also include soft flood protection measures utilising the existing sand dunes along Broughty Ferry Esplanade from the car park to the Glass Pavilion.

- An investment of £6.9m has recently been made to construct set back walls and flood gates from the central waterfront to Dundee airport which used local stone to minimise the carbon footprint and incorporated a combined cycle walkway.

- In 2014, funding was made available to develop growing spaces, with community gardens now established in Menzieshill, Douglas, Lochee, Ardler and Maryfield, enabling local people to grow their own food. Further community gardens have now been created in Charleston, Maryfield and Lochee Park Bowling Green and work is ongoing with the local community to establish a growing space in Fintry. These projects include biodiversity benefits with two of the projects having ponds and others have foraging areas for wildlife. A Food Growing Strategy for Dundee is currently under development

- In 2017/2018, the Council planted 9,345 trees across the city with a further 6,956 trees planted in 2018/19. This figure does not include trees that community groups and school children have planted.

- A new Biodiversity Plan will outline measures to enhance habitats, with the aim increasing biodiversity in the city; including improving recording and monitoring, increasing planting and changing green space maintenance regimes to favour biodiversity and attract pollinators.

6 REDUCING THE COUNCIL'S CARBON FOOTPRINT

6.1 Many of the above actions have contributed to year on year reductions in emissions from the Council's own estate and operations and from 2007/2008, the total carbon footprint has reduced by 31%. Continued investment in improved energy efficiency in buildings, SMART metering, Building Energy Management Systems accounts for approximately 80% of this total reduction, with reductions in travel accounting for 11% and reductions in waste 9%.

6.2 In addition, significant amount of work has been undertaken over last two years to re-scope our carbon footprint boundary and give us much clearer information on our carbon impact, the costs associated with this and what effect the changes in our estate have.

6.3 While the Council has been making efforts to reduce its carbon footprint, it still has much more to do to achieve carbon neutrality, and recognises that further significant change is needed in the Council's approach to dealing with carbon emissions.

6.4 A new carbon management plan will therefore be prepared taking recognisance of the Scottish Government's new targets for carbon neutrality. As part of the plan a Carbon Budget is being explored for trial in 2020 would allocate an allowance of emissions for the following financial year. Council Services would then be required to keep within this allowance over the financial year allowing the Council to better manage how it works towards meeting its emission reduction targets.

7 POLICY IMPLICATIONS

7.1 This report has been subject to an assessment of any impacts on Equality and Diversity, Fairness and Poverty, Environment and Corporate Risk. A copy of the Impact Assessment is available on the Council's website at www.dundeecity.gov.uk/iia.

8 CONSULTATIONS

8.1 The Council Management Team were consulted in the preparation of this report.

9 BACKGROUND PAPERS

9.1 None.

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