

Economy Committee

10am, Tuesday, 23 June 2015

Low Carbon and Resilient Cities

Item number	7.5
Report number	
Executive/routine	
Wards	All

Executive summary

This report sets out the findings of work carried out by the Scottish Cities Alliance (SCA) into economic development opportunities in the low carbon and climate change areas for Scottish cities. The work highlighted a number of impacts for Edinburgh but also detailed opportunities that would deliver economic development benefits in low carbon.

A number of priority actions have been recommended including street lighting, energy retrofit of buildings and district heating. These will be taken forward through the Council's Sustainable Energy Action Plan. In order to realise the economic development benefits including jobs and investment, a new Framework is proposed to deliver these.

Links

Coalition pledges	P17 , P28 P50
Council outcomes	C07-C09 CO18
Single Outcome Agreement	S01 SO4

Low Carbon and Resilient Cities

Recommendations

- 1.1 The Committee is asked to:
- note the findings from the “Low Carbon and Resilient Cities” report and the opportunities and implications for the economy in Edinburgh;
 - note the work being developed by the Sustainable Energy Action Plan (SEAP); and
 - approve the scope of the new Low Carbon Jobs and Investment Framework which will be submitted to Committee in September.

Background

- 2.1 Reducing carbon emissions and the transition to a low carbon and sustainable economy is a key Council priority. This agenda can provide new opportunities for economic development and is challenging the thinking around economic gain, growth and employment in a way that offers positive solutions to economic uncertainties. The need also to build energy resilience for businesses means tackling the low carbon agenda in a proactive way to create new jobs and investment.
- 2.2 In February 2015, the Council approved its first Sustainable Energy Action Plan (SEAP) setting out a programme of action to deliver a 42% reduction in carbon emissions across the city by 2020. This programme covers five areas of activity: energy efficiency, district heating, renewables, resource efficiency and sustainable transport. Under each area a number of specific projects are being developed, many in partnership with other organisations.
- 2.3 The SCA has also identified low carbon as a priority for its own programme of work. During 2014 the SCA commissioned a review of each of the Scottish Cities identifying potential economic risks and opportunities from climate change and the transition to a low carbon economy. This work was reported to the Alliance in February 2015 under the heading of “Low Carbon and Resilient Cities”.
- 2.4 This report highlights the main findings of the Alliance review as it relates to Edinburgh and how this, in turn, relates to the work being progressed through the Council SEAP. The report also proposes a new Low Carbon Jobs and Investment Framework to maximise the opportunities arising from the low carbon agenda and ensure synergies between the Strategy for Jobs, the Council’s; economic strategy.

Low Carbon and Resilient Cities Report

3.1 The SCA commissioned the consultants Jacobs to consider how Scotland's cities can play a key role in transitioning to a low carbon and adapted economy. The review sought to investigate not only how to mitigate carbon emissions but also how to respond to climate change impacts, and avoid potential damages and any associated economic costs which these impacts may bring. In particular the review assessed:

- the economic risks of potential climate change impacts;
- the potential benefits for each city including employment opportunities, job creation and skills development; and
- the specific collaborative opportunities across the cities and where there may be economies of scale.

3.2 Each city received an individual report. In addition, Jacobs produced a summary report that evaluated the collaborative potential of low carbon opportunities across the seven cities. The outcome of that summary is referred to in the separate report on the SCA before this Committee.

3.3 The Edinburgh report highlighted a number of issues and outcomes relating to both mitigation and adaptation where they relate to the city economy.

Adaptation to Climate Change

3.4 This is a complex issue. The physical risks of climate change will have as much impact on the global economy as it will on the local and may lead to consequential impacts in Scotland and Edinburgh including scarcity of certain foodstuffs, supply chain disruptions and migration. For Edinburgh, in terms of sectors, the report highlighted that all sectors in the city are perceived to be affected including tourism, financial and retail. Identified potential impacts included:

- storms and flooding leading to repeated cancelling of events (Edinburgh's Hogmanay being one example that generates £30-35M annually to the economy);
- flooding impacts on infrastructure such as transport links (predicted to increase by between 20% and 25%) including road, rail and the airport, where tourism is a key sector; and
- impacts from pluvial (rainfall) flooding on commercial properties with estimates given of the number of properties at risk.

3.5 However, the Edinburgh report also highlighted that some impacts may have the potential to bring positive economic benefits to the city's economy. For example,

predicted increased summer days could increase the number of visitors to the city, generating £70m in direct expenditure and £28m in indirect spending. Reduction in cold spells could save energy from heating (535 GWh/Year is suggested in the report), potentially saving 124 kt CO₂ equivalent in carbon emissions.

- 3.6 The report suggests that while acknowledging that there are costs in managing impacts, having resilience plans in place can be highly effective in mitigating both costs and impacts. Importantly what is not always a feature of these resilience plans is realising any economic opportunities that climate change impacts may bring. This should be a key feature of any future Edinburgh plans.
- 3.7 Work is already underway on the Firth of Forth local Flood Risk Management Plan which will address all aspects of flood risk. In addition the Council and Adaptation Scotland are working to develop an action plan for the city through the [Edinburgh Adapts](#) project. The project will identify citywide existing and new adaptation actions, and inform the development of a jointly owned action plan with key partners. It will be essential that the recommendations from the Jacobs report are incorporated into the plan to minimise specific impacts on the economy.

Mitigating Carbon Emissions

- 3.8 Developing a more sustainable economy is a key feature of the Council's economic strategy. This will need initiatives that reduce carbon emissions from all types of economic activity as well as ensuring that businesses develop resilience in the energy and low carbon areas.
- 3.9 The Edinburgh report analysed the current work in carbon reduction commenting that there was already considerable activity underway by the Council. The focus therefore was on those areas that could deliver carbon savings and local economic development with direct employment benefits. The report recommended three priority actions to be taken forward by the city in the short to medium term:
- replace or upgrade all street lights with more efficient and low carbon LED lighting;
 - retrofit energy efficiency measures within the public sector; and
 - development of district heating network.
- 3.10 The report provides more details on each of these actions, but collectively they represent a significant opportunity to make considerable carbon and financial savings. The combined capital cost of these three actions is estimated at £60m. The total estimated carbon saving is almost 17.6 kt CO₂e per year; (roughly equivalent to 10% of the Council's annual emissions) although this can be increased substantially by further scaling up of the schemes. In addition,

savings of approximately £7m per year are suggested from operational expenses and running costs.

- 3.11 In terms of economic development benefits, the report suggests that a by-product of implementing these three actions will be the local job and supply chain opportunities. Over a five year programme of activity, 433 FTE jobs would be created equivalent to 2,167 job years of employment. These jobs potentially could be higher value and more specialised, being in the low carbon sector.

SEAP

- 3.12 The delivery of energy and low carbon initiatives will be through the Council's SEAP, referred to earlier in the report. This strategic programme will develop a range of projects to meet its objectives of reducing carbon and delivering affordable energy. In addition, the development of the Council's Energy Services Company (ESCO) is aiming to deliver the strategic projects needed to ensure the Council meets its carbon targets.
- 3.13 The three priority areas of action referred to in Paragraph 3.09 have been incorporated into the SEAP. Progress on each is as follows:
- energy retrofitting of street lighting has already been carried out as trials and funding has been secured for upgrading 10% of the street lighting estate. Further development of retrofitting the estate is being considered and proposals will be submitted to Committee. This particular initiative secures substantial energy and cost savings.
 - the Council has signed up to the London RE:FIT scheme and has now progressed to the first stage in retrofitting nine of the largest council buildings by drafting an ITT. This initiative offers significant opportunities to develop a major energy efficiency scheme that could address public sector buildings in the city.
 - a district heating strategy has been commissioned with plans to develop a number of specific district heating schemes across the city. A heat map will be developed and published in early 2016, looking at the demand for heat in the city. Moreover, guidance for developers is being developed as part of the SEAP implementation programme which will help developers integrate district heating requirements into design plans.

Low Carbon Jobs and Investment Framework

- 3.14 A key aim now of the sustainable economy team is to maximise the economic development opportunities from both the Jacobs report and the SEAP programme. It is proposed that a new Low Carbon Jobs and Investment Framework be developed setting out a plan for increasing jobs and creating new opportunities in the energy and low carbon sectors. In addition the Framework will develop new actions to increase the potential investment in these agendas

and attract “green” investors to the city. The vision is that by implementing the framework, the twin agendas of increasing jobs and investment in the city and shifting the local economy towards being less carbon intensive will be realised. This will also build resilience in the local economy.

- 3.15 Appendix 1 details the proposed scope of the new Framework and the steps for development. The Framework will clearly define the vision for jobs and investment in this area, looking at the drivers such as government policy, legislation and new technologies. It will detail how Edinburgh can best take advantage of new opportunities, building on the local context, and maximising local benefits from these. The framework will look at both support for the greening of organisations, and investment in green organisations and projects in Edinburgh.
- 3.16 The Framework will explore the potential for setting targets, the synergies between the key Economic Development areas such as employment, enterprise and innovation, physical development and investment. It will provide background to the low carbon sector in Edinburgh, looking at resources that can be utilised, supported and developed. The framework will detail actions to realise the vision ensuring that key performance indicators are relevant and robust. The framework will finish with ongoing commitments for monitoring and reporting. The aim will be to report the new Framework to September’s Economy Committee.
- 3.17 The energy and low carbon agendas offer new opportunities for economic development that need to be realised. This is important to related initiatives such as the developing City Deal. It is proposed that synergies will be explored between these work streams.

Measures of success

- 4.1 A key measure of success will be the verifiable reduction of carbon emissions across the city and increasing levels of investment, business growth and job creation in the low carbon agenda.

Financial impact

- 5.1 There are no financial impacts arising from the report.

Risk, policy, compliance and governance impact

- 6.1 The reduction of carbon emissions will comply with the public bodies duties contained in the Climate Change Scotland Act (2009).

Equalities impact

7.1 There are no adverse equalities impacts arising from this report.

Sustainability impact

- 8.1 The development of specific energy and low carbon projects will assist the Council in meeting its carbon and energy targets in the Sustainable Energy Action Plan and wider sustainability targets under Sustainable Edinburgh 2020.
- 8.2 Any projects developed will also contribute to wider sustainability objectives in Edinburgh by helping alleviate fuel poverty in communities and by improving both quality of life and the environment. It will assist in making local businesses more resilient, provide business opportunities for local suppliers, and provide local people with more disposable income, providing a boost to the local economy and a knock on effect in terms of employment opportunities.

Consultation and engagement

9.1 The SEAP has already gone through significant consultation. In producing the Alliance report for Edinburgh, Jacobs consulted with relevant service areas in the Council. There will be consultation carried out in the development of the new Low Carbon Jobs and Investment Framework.

Background reading/external references

[The Sustainable Energy Action Plan](#)

[The Scottish Cities Alliance Low Carbon Resilient Cities](#)

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Links

Coalition pledges	P17 - Continue efforts to develop the city's gap sites and encourage regeneration P28 - Further strengthen our links with the business community by developing and implementing strategies to promote and
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	<p>protect the economic well being of the City</p> <p>P50 – Meet greenhouse gas targets including the national target of 42% by 2020</p>
Council outcomes	<p>CO7 - Edinburgh draws new investment in development and regeneration</p> <p>CO8 - Edinburgh’s economy creates and sustains job opportunities</p> <p>CO9 - Edinburgh residents are able to access job opportunities</p> <p>CO18 – Green – we reduce the local environmental impact of our consumption and production.</p>
Single Outcome Agreement	<p>SO1 - Edinburgh's economy delivers increased investment, jobs and opportunities for all</p> <p>SO4 Edinburgh’s communities and safer and have improved physical and social fabric</p>
Appendices	<p>Appendix 1 Proposed Scope of Low Carbon Jobs and Investment Framework</p>

Appendix 1: Proposed Framework for Jobs and Investment in the Low Carbon Sector

Overview

This paper sets out the proposed content for a strategic framework for jobs and investment in the low carbon sector. An early draft of the framework will be consulted on with elected members, colleagues and other strategic stakeholders.

Proposed Scope

The proposed contents of framework will include:

Executive Summary	-
Definitions	This section will define what we mean by the Low Carbon sector in its broadest sense and the interpretation of “green jobs”.
Vision	This section will set the aspiration for the framework, setting out what we are looking to achieve and where we think we will be in 5 or 10 years.
Aims and objectives	This will set out the aims and objectives for the framework that will realise the vision. This may also look at setting targets in terms of the number of jobs that might be created.
Context and baseline	This section will describe Edinburgh’s low carbon baseline and context and relate this back to the economy. It would also cover where the low carbon sector is currently in Scotland and the city.
Networks and partners	Who should be involved in the development of the Framework? Who are the partners necessary for delivery?
Drivers – Policy and others	These are the policies that drive the move to a low carbon economy such as the Scottish Government Low Carbon Economic Strategy; Sustainable Edinburgh 2020. This will include policies being delivered in Edinburgh that will realise economic opportunities, such as the delivery of the Sustainable Energy Action Plan. It will also appraise wider commercial drivers such as technologies and consumers. Other drivers to be included are rising energy costs, energy security and resilience
Linkages with Council Strategies	This section would explore the links between Council strategies that would be complementary and relevant to the Framework

The Sectors	Where would the potential jobs come from? This section would identify the sectors for new jobs in the energy and low carbon areas and investment.
Benefits	This section would set out what will be the benefits and who will benefit? This could include: <ul style="list-style-type: none"> • Innovation, profitability and growth. • Increased competitiveness • Financials savings on energy and resources. • Cost effective resource management. • Investment, opportunity and awareness. • Reducing risks and building resilience
Smart Action Plan	This section will provide details of the actions necessary to deliver low carbon jobs and investment. This will look at: <ul style="list-style-type: none"> • Skills, marrying supply and demand for these • Support for organisations working in low carbon and seeking to become more resource efficient • Support for investment in the low carbon sector. • The interventions needed to deliver the Framework • Consideration will also be given to actions around processes (Community Benefit clauses, sustainable procurement) that can be used to benefit the Low Carbon economy.
Governance, monitoring and reporting arrangements.	This section will look at the monitoring and governance of the framework for transparency and scrutiny. It will also include any methodologies for measuring jobs in the energy and low carbon sectors.

Next Steps

There are a number of steps that need to be completed in order to put together the details of the Framework. Specifically the following items will be addressed before reporting back to Committee:

- Reviewing the strategic policy drivers to critically appraise these in the local context
- Appraisal of Edinburgh's strengths, weaknesses, opportunities and threats in the context of Low Carbon.
- Writing the framework and developing a detailed action plan
- Consultation and engagement with stakeholders
- Reporting back to committee for sign off (September, 2015)
- Implementation of the framework.