

## SERVICE UPDATE

<b><u>Name of Service:</u></b>	Communities Housing and Infrastructure
<b><u>Date:</u></b>	30 <sup>th</sup> October 2017
<b><u>Title of Update:</u></b>	Powering Aberdeen-Annual Report
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### **UPDATE:**

In October 2016 Full Council approved the final version of Powering Aberdeen-Aberdeen's Sustainable Energy Action Plan (SEAP). The Director of Communities, Housing and Infrastructure was asked to submit an annual report on progress in implementing Powering Aberdeen to the Communities, Housing and Infrastructure Committee (CHI/16/214).

The following paper presents the annual progress report for the period October 2016 to October 2017.

### **Background**

Powering Aberdeen is a city wide programme to reduce carbon emissions. The strategy aims to deliver much wider benefits to the city of Aberdeen in relation to improving air quality, reducing fuel poverty, reducing costs, and encouraging growth in new technology and diversification of the economy. The programme has five main strands:

- Increase uptake of alternative energy
- Improved energy efficiency
- Sustainable transport
- Resource efficiency
- Leadership and engagement

The carbon reduction targets set out Powering Aberdeen are as follows:

- 31% reduction in emissions by 2020 from a 2005 baseline
- 50% reduction in emissions by 2030 from a 2005 baseline

### **Measuring progress**

City wide carbon emissions are measured using publicly available data published by the Department of Business, Energy and Industrial Strategy (BEIS) and local information on energy generation. Emissions for the baseline year 2005 and 2012 were calculated as part of developing Powering Aberdeen. During 2017 the data has been updated for 2014 as the most recent data set available as shown in Figure 1.

Figure 1: Emissions inventories (for 2005, 2012 and 2014) and the historic emissions trend for Aberdeen City 2005 – 2014

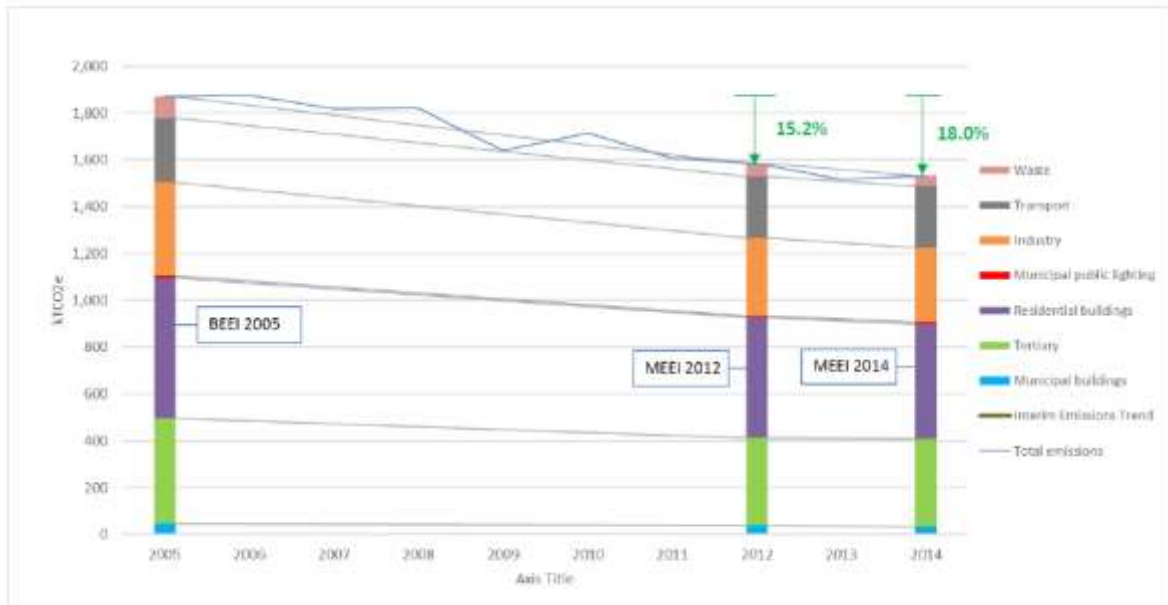


Figure 1 shows an overall reduction in emissions of 18% since 2005 with a reduction of 2.8% between 2012 and 2014. On this trajectory Aberdeen City Council should come close to meeting the 2020 target. It also shows the relative contribution from different emission sources with energy use in domestic buildings being the biggest contributor to overall emissions.

### Increase uptake of alternative energy

Currently about 4.3% of electricity used by Aberdeen city is generated locally. This is primarily from solar roof top schemes and CHP systems linked to district heating networks run by Aberdeen Heat and Power, the University of Aberdeen and the NHS. The following projects will significantly increase this figure contributing to meeting the targets set out in Powering Aberdeen:

- The electricity and heat generated by the energy centre at the new AECC
- The heat and electricity generated by the new EfW
- Proposal for a new privately developed solar farm south of the city
- A proposed solar farm at the former Ness landfill

If these projects all come on stream they will almost triple current renewable generation within the city contributing to estimated carbon savings of around 60,000 tonnes which represents around 4% of the total emissions.

Large scale developments such as the off shore wind farms cannot be included in the Powering Aberdeen statistics as, in line with European rules, they are considered to be national rather than local generation assets.

Through Powering Aberdeen we are working closely with Scottish Enterprise to investigate a number of opportunities to further develop the low carbon infrastructure in the city funded by the Low Carbon Infrastructure Programme.

The Council has recently received funding through the Scottish Energy Efficiency programme (SEEP) to develop a pilot Local Heat and Energy Efficiency Strategy (LHEES) for the Ward of Tillydrone, Seaton and Old Aberdeen. The output will be a 20 year plan setting out measures that can be implemented in this area to move to low carbon heat and improved energy efficiency.

The Scottish Government is currently proposing that development of city wide LHEES will become a statutory duty for local authorities in the future. The learning from this pilot will be used to develop a wider plan for the city which will become a central delivery strategy within Powering Aberdeen. These plans will provide a focus for future investment and funding applications and their delivery will be an important contributor to the emission reduction targets set out in Powering Aberdeen.

### **Improved Energy Efficiency**

The Council has continued to fund energy efficiency programmes both to improve energy efficiency in social housing to comply with the Energy Efficiency Standards for Social Housing (EESH) as well as to address fuel poverty both in the social housing sector and wider domestic housing sector in Aberdeen. A significant project over the past 12 months has been funded through the Scottish Energy Efficiency Programme (SEEP). This includes:

- External wall insulation to seven multi-storey buildings
- Extension of the heat network to a number of non-domestic buildings in the city centre
- Improvements to the efficiency of the heat network through thermal storage
- Heat recovery from the ice rink

The extent of emission savings from these activities have not yet been calculated but will be determined on project completion. The overall impact of energy efficiency measures can be difficult to measure on a project by project basis as household consumption data is not available to the Council. However the effectiveness of these types of schemes can be seen in the overall city wide emission data as shown in Figure 1.

Emissions associated with residential buildings across the city have reduced by 18% between 2005 and 2014 and by 4.6% in 2012 and 2014. This is against a trend of increasing population growth and ongoing expansion of the housing stock.

### **Sustainable Transport**

Reducing emissions from transport remains the biggest challenge for the city. Since the 2005 baseline, emissions associated with transport have reduced by 4.4%, but during the period 2012 to 2014 emissions in fact increased by 0.7%.

These figures emphasise the importance of the proposed measures to reduce reliance on the car set out in the City Centre Master Plan, Local Transport Strategy and associated Sustainable Urban Transport Plan (SUMP). Delivering the targets to reduce traffic in the city centre by 20% and increasing walking and cycling will start to reduce carbon emissions associated with transport as well as improve air quality. These reductions should be reflected in future figures.

To achieve the longer term targets these measures will need to be supported by much wider uptake of alternatively fuelled vehicles such as hydrogen and electric. The Council is leading the way in the introduction of hydrogen buses and cars. Over the past 12 months 12 hydrogen cars were introduced to the city, including a licenced

taxi. In February 2017 the new hydrogen fuelling station for cars and vans opened at Cove. Further funding is being sought to increase the number of hydrogen cars and buses in the city.

The city now has 78 electric charging points (48 public, 18 car club and 12 fleet) that have seen an increase in usage of 243% over the past three years. The Council, working with the Energy Saving Trust, is seeking to encourage wider uptake of electric vehicles.

### **Resource Efficiency**

The new recycling programme is increasing recycling rates which is contributing to a reduction in emissions as less waste is going to landfill. The savings anticipated if the planned recycling targets are met is 16,000 tonnes of CO<sub>2</sub>e by 2020 a further 1% reduction.

Looking forward Zero Waste Scotland has recently commissioned a study to undertake a circular economy scan of Aberdeen and Aberdeenshire. This will look at the flow of materials in, out and within the region to look for opportunities to implement circular economy principles that seek to design out waste. Local partners including Aberdeen City Council will be supporting Zero Waste Scotland progress the opportunities identified through the project.

The Council also has an on-going relationship with Resource Efficient Scotland through which free audits to SMEs are being promoted. These audits help SMEs identify costs savings in relation to resource management (energy, water and waste) and thus also help reduce emission. From the 20<sup>th</sup> to the 24<sup>th</sup> November Sustainable Business Week will take place. This will consist of a series of events aimed at promoting resource efficiency and encouraging SMEs to sign up for free audits.

### **Leadership and Engagement**

A Powering Aberdeen Steering Group was established in summer 2016 and meets every six months. The role of the Steering Group is to review progress in delivering Powering Aberdeen and support and promote its progress. Steering group members include a range of public organisations including the Universities, NHS, SCARF, Nestrans, Scottish Enterprise, Police Scotland and Aberdeen Inspired. Councillor Philip Bell has recently been appointed as the Elected Member representative for Powering Aberdeen and will chair this group.

An internal governance structure for Powering Aberdeen has been established through the Energy Board. The Energy Board monitors progress, supports decision making and provides governance for capital projects.

Powering Aberdeen is a city wide programme and therefore involves the need for engagement across sectors to deliver the reduction targets. One of the challenges over the last year has been how to engage more widely with the business community. Through Powering Aberdeen work is ongoing with local businesses to establish a business sponsored Green Business Network in line with the one established in Fife to provide a focus for events, communication and sharing best practice within the business community.

To help further the aims of Powering Aberdeen a business case has been developed to establish an Energy service Company as an arms length body to the council. It is anticipated that the business case will be presented to Full Council for final decision in December 2017.