DIRECTORS REPORT 2012-13

THE CHALLENGE OF CLIMATE CHANGE – OUR APPROACH

Since 1990, there has been a decrease in UK carbon dioxide emissions of around 19 per cent. This fall in emissions has been accompanied by a decrease in overall energy consumption over the period, of around 3 per cent. If this figure is adjusted to allow for the effect of temperature, energy consumption has fallen by around 6 per cent between 1990 and 2012. A number of factors explain this effect, such as changes in the efficiency in electricity generation and switching from coal to less carbon intensive fuels such as gas.

This document is designed to help the Council manage its greenhouse emissions in line with the Climate Change Act 2008. The direct benefit of reporting and measuring environmental performance is to gain a better understanding of the Council’s energy and resource consumption and to lower these over time. It demonstrates leadership and allows for targets to be set.

What is in the report?

A number of gases contribute to climate change. The Kyoto Protocol – the international agreement addressing climate change – covers six main GHGs:

- Carbon Dioxide CO₂
- Methane CH₄
- Hydrofluorocarbons HFCs
- Nitrous oxide N₂O
- Perfluorocarbons PFCs
- Sulphur hexafluoride SF₆

Different activities emit different gases, for example, burning fossil fuels releases carbon dioxide, methane and nitrous oxide into the atmosphere.

Greenhouse gas emissions are reported in terms of the metric tonne of carbon dioxide equivalent (CO₂e). This gives the global warming effect of the mass of GHG in terms of what carbon dioxide would produce the equivalent effect.

The data is organised into scopes. These are defined in the GHG Protocol Corporate Standard and used in ISO 14064-1

Scope 1 – Direct Emissions – Emissions from activities owned or controlled by the organisation that release emissions. For example, combustion from boilers, furnaces, vehicles. The data for this is taken from mileage database for all council owned vehicles, which includes model, type and weight of the vehicle. Gas data is taken from energy bills and data for coal and oil is taken from purchase data between Apr12-Mar13.
Scope 2 (Energy Indirect) – Emissions released into the atmosphere associated with your consumption of purchased electricity, heat, steam and cooling. These are indirect emissions that are a consequence of your organisations activities but occur at sources you do not own or control.

The data for this is again taken from energy bills and kwh consumption. A small percentage is estimated due to problems with billing on certain sites.

Scope 3 (Other indirect) – Emissions that are a consequence of the Councils actions, which occur at sources which you do not own or control. For example business travel (car, rail and bus).

Data for business mileage is downloaded from the employee mileage software and the type of car and engine size is included. The fuel type is collated through the paper copies of the mileage claims as the software cannot include this.

Rail data is imported from the company where tickets are purchased from. Not all rail tickets are purchased through this but this is too time consuming to collate considering the impact it has on the results.

Distribution and loss factors are now added to Scope 3 and emission conversion factors provided by DEFRA are used.

How Are the GHG emissions calculated?

The most common approach is to record or estimate activity data, eg mileage travelled or kwh of electricity used and multiply it by an emission conversion factor which gives an estimate of the GHG emissions. The UK Government GHG Conversion Factors are annually updated with emission factors.

Identifying Risks and Opportunities Posed by Climate Change to Council Services and Estates

Bassetlaw District Council increasingly understands the requirement for them to play their role in reducing their demand for energy and resources. It has identified the opportunities to make savings and reduce waste, therefore also identifying the risks and opportunities climate change poses to the Council services. The Council is to instigate its own reduction targets in the future. Bassetlaw has developed a Climate Change Strategy that is updated annually. This document further outlines the visions and targets set out below.

- Demonstrate leadership and take action to adapt and mitigate to climate change.
- To signpost and facilitate the public, business and communities in playing their part in the emission reduction challenge.
- To act sustainably and be open and transparent in its operations and commitment in emission reduction and to find the appropriate balance between environmental benefits and economic impact.
To be outward looking and see the problem of climate change as a global and local issue.
To adhere to reduction targets which are both obtainable and beneficial through the implementation of work plans throughout all elements of council services and its estates.

Vision & targets

The priorities for action are:

- **Energy and Carbon Management**
  - Review our energy and carbon management at Board level
  - Develop more use of renewable energy where appropriate
  - Measure and monitor on a whole life cycle cost basis
  - Ensure appropriate behaviours are encouraged in individuals as well as across the organisation

- **Water**
  - To implement efficient use of water by measuring and monitoring its usage
  - Quick operational responses to leaks

- **Waste**
  - Monitor, report and set targets on management of domestic waste and recycling

- **Travel and Transport**
  - Routinely and systematically review the need for staff to travel
  - Consistently monitor business and grey mileage
  - Provide incentives for low carbon transport and that used for Council operations
  - Provide education on the bonuses of alternative transport

- **Designing the built environment**
  - Design alterations and new building to encourage sustainable development and low carbon usage in every aspect of their operation. This includes resilience to the effects of climate change, energy management strategies, and a broader approach to sustainability including transport, service delivery and community engagement

- **Organisational and workforce development**
  - Staff will be encouraged and enabled to take action in their workplace
  - Staff will be supported by promoting increased awareness, conducting behavioural change programmes, encouraging low carbon travel, the use of ICT, and by ensuring sustainable development is included in every job description

- **Partnerships and networks**
  - Bassetlaw will play an active role in the regions targets and actions toward use of resources and climate change

- **Governance**
  - To produce an approved Carbon Management Plan. We will set interim targets and trajectories to meet the provisions of the Climate Change Act. In the first instance, this will be set at 10%, as a minimum, of the 2007 levels by 2015. Carbon reduction and sustainable development are corporate responsibilities and should be an inherent part of our performance and governance mechanisms.
Finance
To become emission literate, emission numerate and ensure appropriate investment to meet the commitments required to become part of a low carbon council and in preparation for the CRC. Partnership working will be required to deliver appropriate incentives, economies and training to support this shift in culture and for the local economy.

Developing a Carbon Management Plan

A Carbon Management Plan (CMP) will set out the actions required to deliver a sustained reduction in carbon emissions, and will form the base document, which will be used to monitor Bassetlaw District Councils performance. Alongside this document detailed plans will set out, in a table format, defining specific objectives that are measurable, what actions are required to deliver the objective together with the resources needed and the time for delivery.

In summary, Bassetlaw District Council will:

- Present a Greenhouse Gas Annual Report to the Directors, presenting progress / issues.
- Develop an annual Carbon Management Plan, this will have its foundations in the new Green House Gas Emission report issued annually and submitted to the Department of Energy and Climate Change and DEFRA.
- Ensure that all capital schemes will have an Environmental Impact Assessment prepared to ensure that measures that can be incorporated to reduce energy consumption and water use are considered and incorporated.
- Facilitate staff to engage in Carbon Reduction plans and activities.
- Will seek to maintain partnership working with local and national bodies that support and promote carbon reduction strategies.
Greenhouse Gas Emission Results

Table 1

<table>
<thead>
<tr>
<th>GHG emissions data for period 1st April 2007 to 31st March 2013</th>
<th>Global tonnes of CO₂e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008/07</td>
</tr>
<tr>
<td>Scope 1 – Gas and Council owned transport</td>
<td>1186.34</td>
</tr>
<tr>
<td>Scope 2 - Electricity</td>
<td>1176</td>
</tr>
<tr>
<td>Scope 3 – Indirect emissions – employee mileage and rail and in 2013 losses and distribution added for electricity</td>
<td>67.26</td>
</tr>
<tr>
<td><strong>Total Gross Emissions in tonnes of CO₂e</strong></td>
<td><strong>2429.6</strong></td>
</tr>
<tr>
<td>Carbon offsets</td>
<td>0</td>
</tr>
<tr>
<td>Green Tariff</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total annual net emissions</strong></td>
<td><strong>2429.6</strong></td>
</tr>
<tr>
<td><strong>Intensity measurement 'Tonnes of CO₂e per total square meters</strong></td>
<td>9.22</td>
</tr>
</tbody>
</table>

Since 2010/11 the Council has reduced its emissions by 883 tonnes of CO₂e a decrease of 25.7% which surpasses the original target of a 10% reduction. The Council has however increased its emissions by 18 tonnes from last year, a .007% increase. If the Council was part of the Carbon Reduction Commitment and had to pay £12 per tonne of emissions it would have made a saving of £10596 over a three year period.

Company Information

Bassetlaw District Council
Queens Buildings
Potter Street
Worksop
Notts
S80 2AH
Reporting Period

01.04.12 – 31.03.13

Change in Emissions

Scope 1

Scope 1 is made up of two categories; Council owned fleet and purchased gas. Since 2009/10 there has been consistent reduction in tonnes of CO2e in transport which is a great achievement. However when the figures are split down further, as table 2 shows the decrease is down to Council owned fleet and not purchased gas. Transport have developed a number of methods to decrease mileage including the purchase of more fuel efficient vehicles and reducing the mileage of refuse vehicles by introducing more economic routes.

Although gas has fluctuated, this could be due to the outside temperature as it remained cooler for longer last year. Also the increased usage of the Leisure Centres who are the largest gas users on the Council property portfolio has added to the emissions. The increased capacity of the ex Notts County wing could also have increased gas requirement. These figures show that efficiency projects in the transport department are working and the investment worthwhile. Fluctuation in gas usage is very weather dependant and the fabric of some of the larger buildings is not efficient. However, the leisure centres are being prioritised for efficiency updates.

Table 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Transport kg/CO2e</th>
<th>Heating kg/CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/8</td>
<td>537962</td>
<td>648377</td>
</tr>
<tr>
<td>2008/9</td>
<td>1023077</td>
<td>903742</td>
</tr>
<tr>
<td>2009/10</td>
<td>1658008</td>
<td>444440</td>
</tr>
<tr>
<td>2010/11</td>
<td>1592193</td>
<td>1253511</td>
</tr>
<tr>
<td>2011/12</td>
<td>577989</td>
<td>829003</td>
</tr>
<tr>
<td>2012/13</td>
<td>548460</td>
<td>835672</td>
</tr>
</tbody>
</table>

Scope 2

Purchased electricity and renewable energy created comes under Scope 2.

Firstly the increase in renewable energy produced is the result of having both wind turbines situated at Carlton Forest and the Retford Enterprise Centre reinstated and the addition of photovoltaics on West House.
The usage has fallen from baseline year of 2007 however from last year there has been an increase. During this period capacity was increased in the Queens Buildings and 18b and 18 The Square were sold off. Efficient lighting and sensors were placed in the corridors of Queens Buildings but the project did not complete until Jan13, so their impact is negligible for the time period.

The overall kwh consumption has however reduced by 100866.7kwh from 2011/12 but a change in the emission factors made by DEFRA for this year 2012/13 maybe altering the outcome. All previous year factors were changed in line with these changes also.

**Scope 3**

Unfortunately Scope 3 has increased by 39 tonnes of CO$_2$e even though business mileage has decreased by almost half. The Council may consider pool cars or other efficiency measures to reduce the mileage produced through staff having to go out into the District and other areas.

The addition of transmission and distribution loss factors of electricity to scope 3 have significantly affected the trend of scope 3.

Rail travel has not increased or decreased greatly enough to affect figures.

**Approach**

We have followed the Defra/DECC’s guidelines on how to measure and report greenhouse gas emissions.

**Organisational Boundary**

We have used the financial control approach.

**Operational Scopes**

We have measured that which is appropriate to our operations in scope 1, 2 and significant scope 3 emissions.
Table 3

<table>
<thead>
<tr>
<th>Scope 1</th>
<th>GHG emissions 2011/12 in tonnes of CO₂e</th>
<th>State specific exclusions and % this represents for relevant scope (excluding geographic exclusions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas consumption</td>
<td>835.7 t/CO₂e</td>
<td></td>
</tr>
<tr>
<td>Owned transport</td>
<td>548.4 t/CO₂e</td>
<td></td>
</tr>
<tr>
<td>Process emissions</td>
<td>Not applicable to Local Authority</td>
<td>Emissions from air conditioning is in one building only and was not counted due to them accounting for less than .5% of total scope 1 emissions.</td>
</tr>
<tr>
<td>Fugitive emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Scope 1</strong></td>
<td><strong>1384.07 t/CO₂e</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope 2</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Purchased electricity</td>
<td>1054 t/CO₂e</td>
<td></td>
</tr>
<tr>
<td>Renewables</td>
<td>43 t/CO₂e</td>
<td></td>
</tr>
<tr>
<td><strong>Total scope 2</strong></td>
<td><strong>1011.94 t/CO₂e</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Significant Scope 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business travel</td>
<td>654 t/CO₂e</td>
<td>Claimed mileage and rail</td>
</tr>
<tr>
<td>Employee commuting</td>
<td></td>
<td>We do not have the current capacity to record this</td>
</tr>
<tr>
<td>Distribution and loss electric</td>
<td>833 t/CO₂e</td>
<td>Added to the emissions in Scope 3</td>
</tr>
<tr>
<td>Waste Disposal</td>
<td></td>
<td>Bassetlaw collects but does not have the responsibility of disposal</td>
</tr>
<tr>
<td>Product in use</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Total significant scope 3</strong></td>
<td><strong>1487 t/CO₂e</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Base Year**
Our base year is 2006/7 which was the base year set during the National Indicator 185 requirement.

Subsequent years data have then been transposed into greenhouse gas emissions and CO₂e in accordance with DECC’s and DEFRA guidance notes.
**Targets**
Our emission reduction target is to decrease emissions by 10% by 2015. Data collation issues have encumbered this but the increase in smart metering systems will aid this. To date we have met the target and increased it by 15%.

**Intensity Measurement**
We have chosen ‘Tonnes of CO$_2$e per total square meter’, as this is more applicable to our sector.

**External Assurance Statement**
Bassetlaw District Council will have the document assessed by auditors in due course.

**Carbon Offsets**
Bassetlaw has invested and is investing in renewables technologies and thereby offsetting its carbon emissions. To date it has two 15kw wind turbines and has installed photovoltaics on one of its properties and possibly rolling this out across the estate, subject to funding.