

READING BOROUGH COUNCIL

REPORT BY DIRECTOR OF ENVIRONMENT & NEIGHBOURHOOD SERVICES

TO:	STRATEGIC ENVIRONMENT, PLANNING AND TRANSPORT COMMITTEE		
DATE:	15 July 2015	AGENDA ITEM:	8
TITLE:	Carbon Plan, 2015-2020		
SERVICE:		WARDS:	ALL
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1. PURPOSE OF REPORT AND EXECUTIVE SUMMARY

1.1 This report outlines the proposed new Carbon Plan, 2015-2020, which sets out our policy, targets and action plan for energy, water and carbon management, within the time period 2015-2020. This strategy builds on the successes of the previous six years of carbon reduction, which has seen the corporate carbon emissions 31% (2013/14) down on the 2008 baseline, 10% ahead of annual target and avoided costs of £1.1m (2013/14).

As set out in Reading's Climate Change Strategy 2013-20, Reading Borough Council is committed to reduce its carbon emissions by 50% by 2020, against a 2008 baseline year. As such a further 20% reduction on carbon emissions, or 3,700 tCO₂ is needed to meet this target. Work in progress is cautiously predicted to further reduce the carbon emissions of the council by around 2,400 tCO₂, which would bring the council's carbon footprint to 10% above our target emissions.

The Carbon Plan sets out actions to ensure the authority continues to be compliant with relevant legislation and national reporting requirements, to bridge the carbon emissions savings gap by reducing the footprint by 50% by 2020 (against a 2008 baseline) and to increase the use of low carbon and renewable technologies, generating at least 15% of total energy use off grid by 2020. Our priority for the period of this strategy, 2015-2020, is to reduce the carbon emissions of the council, by managing our energy and water use. This work directly supports the Council's aspiration to narrow the gaps in Reading to ensure everyone can benefit from its success.

This plan focuses our work on four key issues for the council; 1) Cost of resources; 2) Environmental impact; 3) Energy decarbonisation; and 4) Integration of energy management approaches throughout the organisation. The Energy and Natural Resources Group will be responsible for driving and monitoring the progress of this plan.

The Carbon Plan will support the organisation in achieving the Council's service priorities in; 'Keeping the town clean, safe, green and active'; 'Providing infrastructure to support the economy'; and 'Remaining financially sustainable to deliver these service priorities' (Corporate Plan 2015-18).

1.2 Appendix 1: Carbon Plan, 2015-2020

2. RECOMMENDED ACTION

- 2.1 *Councillors approve the submission of the Carbon Plan, 2015-2020, which highlights savings, avoided costs and progress to date and sets out actions to continue to reduce carbon emissions over the next 5 years to enable the council to meet the 50% reduction target 2020.*

3. POLICY CONTEXT

3.1 *National policies*

Since Reading Borough Council signed the Nottingham Declaration on Climate Change in 2006 there have been numerous local and national policies and targets, and legislation which have influenced the Council's energy management work.

The 2008 Climate Change Act established the world's first legally binding climate change target. The act aims to reduce the UK's greenhouse gas emissions by at least 80% (from the 1990 baseline) by 2050.

3.2 *Local policies*

In 2007 RBC worked with the Carbon Trust to produce Reading's Local Authority Carbon Management Plan (LACM), which measured and reported the authority's carbon footprint, set a 2% annual carbon reduction target and identified potential activities to make carbon reductions.

3.2.1 *Climate Change Strategy*

In 2008, the Council launched its Climate Change Strategy (2008-2013), '*Stepping Forward for Climate Change*'. A key commitment in this document, informed by the LACM, was to reduce its carbon footprint by 20% by 2012/13 and 50% by 2020. This has been reinforced by the Reading Climate Change Strategy 2013-20, '*Reading Means Business on Climate Change*' a collaborative strategy with business, community and public sector.

3.2.2 *Corporate Plan 2015-2018 and 'Narrowing the gap'*

Reading Borough Council has set out its key priorities to help narrow the gaps in Reading to ensure that everyone can benefit from its success (Corporate Plan 2015-2018). Six service priorities have been identified to focus the work of the Council. Our priority for the period of this strategy, 2015-2020, is to reduce the carbon emissions and close the savings gap. Our work to manage the council's energy and water use directly supports three of the Council's service priorities; Keeping the town clean, safe, green and active; Providing infrastructure to support the economy; and Remaining financially sustainable to deliver these service priorities.

We continue to focus our work on the four key issues which affect our energy and water use and carbon emissions; cost; environmental impact; energy decarbonisation; and integration of energy management approaches throughout the organisation.

3.2.3 *Other RBC policies and work streams*

It is crucial that the activity identified within the Carbon Plan is closely linked with work that is occurring within services which have a significant dependence on energy, such as, asset management, street lighting policy use and facilities management.

4. THE PROPOSAL

4.1 **Current Position:**

Reading Borough Council's current corporate (not including schools) energy spend in 2013/14, principally on electricity and gas, for buildings and street lighting, totalled over £2m (not including standing charges and network charges). The corporate carbon footprint for 2013/14 was 13,585 tCO₂, 31% down on the baseline year (2008/9).

Unit prices for energy have varied annually but increased overall over the last six years, so although energy use in kWh has decreased by over 30% since 2008/9, spend on energy has slightly increased.

Since the Council began its investment programme in 2008 just under £1m has been invested through the SALIX energy efficiency fund. Of this, £669 k has been invested in 48 corporate projects, totalling an annual saving of £190 k, 1,320 tCO₂, with an average 3.5 year pay back. Reading Borough schools have invested £261 k in 22 projects, giving a total annual saving of £50 k, 278 tCO₂, with an average pay back period of 5.3 years.

Reading Transport Ltd have continued to invest in their bus fleet. These investments include electric hybrid vehicles and more recently a fleet of renewably sourced, Compressed Natural Gas (CNG) fuelled buses. RTL have begun replacing Euro IV vehicles with more efficient Euro VI double deck buses. This substantial investment in the bus fleet has reduced the fuel consumption and associated carbon emissions of the fleet by 13% (tCO₂ per kilometre travelled) and helped to improve the air quality of the Borough.

A major investment of £1.22m on 26 solar panel systems on schools, council and community buildings was made in 2012, saving 210 tonnes of carbon emissions per annum and creating an income of £135,000 per year to the Council (from energy charging and government incentive scheme).

In 2013/14, the Council installed 1,300 LED streetlights. This represents around 10% of the streetlights in Reading. LED (Light Emitting Diode) technology is capable of reducing energy use from the lamps by over 70% and makes significant savings on maintenance.

In 2014/15 the Council invested £1.1m on energy efficiency and renewable energy measures in the new Civic offices, which is predicted to reduce the energy use of the Council's headquarters by 75%. The new Civic offices now host the Council's largest solar panel system with 572 solar panels, generating an estimated 10% of the building's electricity.

As a result of these actions, in combination with others, the corporate carbon emissions from 2013/14 were 31% down on 2008, 10% ahead of target. An assessment of 'value at stake' shows that over £1m of energy costs were avoided by the Council in 2013/14, compared to no action being taken.

Work is ongoing to continue to reduce the carbon emissions of the Council, including the installation of approximately 5,400 PV solar panels on around 465 Council houses, a full upgrade of street lights across the borough to LED lamps and investigations into the development of energy performance contracting schemes to invest in whole building approaches with guaranteed energy savings. Cautious predictions estimate that the most recent and ongoing investments should save at least a further 2,400 tCO₂. Should RBC maintain its current energy consumption, and make only these recently identified savings, the carbon footprint would be around 1,300 tCO₂ adrift from its corporate 2020 target of 9,881 tCO₂, or over 10% above the target emissions. The aims, objectives and actions set out in this new plan should bridge this savings gap.

4.2 Option Proposed

The new Carbon Plan for the Council sets the policy, targets and action plan for energy, water and carbon management, within the time period 2015-2020.

The plan sets out actions to ensure the authority continues to be compliant with relevant legislation and national reporting requirements, to reduce carbon emissions

by 50% by 2020 (against a 2008 baseline) and increase the use of low carbon and renewable technologies, generating at least 15% of total energy use off-grid by 2020.

Building on the successes of the previous six years of carbon reduction, this plan focuses our work on four key issues for the council;

- 1) Cost of resources;
- 2) Environmental impact;
- 3) Energy decarbonisation; and
- 4) Integration of energy management approaches throughout the organisation.

An action plan has been developed which outlines our work to help bridge the carbon emissions savings gap by 2020, and reduce the Council's energy and water use, and ensure that the necessary systems and processes are in place to allow continuous improvement in the Council's operations, through effective monitoring and management of energy and water use.

In summary the actions fall into four categories;

- Establishing and maintaining organisational systems and approaches that maintain and improve the efficient use of energy and water, and make energy and water management an integral part of decision making processes
- Identification and investment in infrastructure and building estate
- Planning for and being ready for opportunities in the future
- Working with others and sharing good practice

To achieve the levels of energy, water and carbon emissions reduction required, certain levels of investment will be needed. The key investments identified for further investigation within this plan are;

1. *Further Salix investment in RBC building estate*: Salix Funding is invest-to-save funding which was secured in 2008, and will remain available to the Council should appropriate investment opportunities continue to be identified. All projects must meet strict Salix Funding investment criteria. Significant experience has been gained from investment in 48 corporate and 22 school projects. Currently a further 3 corporate projects are in progress and 12 more are in development.
2. *Street lighting upgrade across the borough, including bollards and signage*: Funding has been secured from the Department for Transport (DfT) to cover 70% of the cost of upgrading all street lighting across the borough. This project is in collaboration with Slough and Wokingham Borough Council. The remaining 30% of our cost will be met by RBC.
3. *Energy Performance Contracting, potentially using the RE:FIT framework, to upgrade key buildings using a 'whole building approach'*: initial assessment of buildings' potential being undertaken in conjunction with Local Partnerships, through the Energy and Natural Resources Group and Land & Property Working Group. Results of desktop assessment will provide basis for development of full business case for approvals.
4. *Further investment in renewable technology to generate additional, long-term income*: Further corporate sites under assessment for suitability of PV, a solar farm scheme is being investigated and PV is to be considered for the new school expansions. Assessment of potential of all RBC estate, for solar PV, is planned.

The Energy and Natural Resources Group will be responsible for monitoring and driving the progress of this strategy. This officer group will have appropriate directorate representatives and technical specialists as members of the group. The group will steer the progress of the key projects identified within the strategy, and will update and communicate with other relevant officer groups, senior management and councillors, when appropriate, to ensure all key stakeholders are involved in the development and implementation of actions from the Carbon Plan, and decisions are made with appropriate information.

The Energy and Natural Resources Group will work with others and share good practice, such as Reading Transport Ltd, and will seek to better measure and report the carbon emissions of the wider operations of the authority.

The value at stake represents the total potential cost savings in energy and water that can be obtained through adopting the proposed activity within the Carbon Plan. Should RBC adopt the Carbon Plan, the potential savings over and above the energy savings recently identified, or in progress (totalling over £700k), are indicated to represent at least a further £500k saving on annual energy costs by 2020. Should energy prices increase, which over a 5 year period is likely to occur, with the Department of Energy and Climate Change predicting on average an annual increase of 1.7%, these avoided costs would be higher.

Avoided costs should also be taken into consideration. Organisations which do not monitor and manage their energy use effectively across their estate typically experience a drift in energy use upwards of around 1.5% per year (Carbon Trust). By managing our energy use closely and effectively the Council would avoid this drift in energy use, which could be over £380k in 2020/21, assuming no energy price increases.

Further detailed work is required to establish certainty with the scale of future savings. Thorough business cases will be developed for future significant investment, which will include systematic analysis and conservative estimates of proposed savings.

5. CONTRIBUTION TO STRATEGIC AIMS

- 5.1 Reading Borough Council has set out its key priorities to help narrow the gaps in Reading to ensure that everyone can benefit from its success (in its Corporate Plan 2015-2018). Six service priorities have been identified to focus the work of the Council. Our priority for the period of this strategy, 2015-2020, is to reduce the carbon emissions savings gap and our work to manage our energy and water use directly supports three of the Council's service priorities;

Keeping the town clean, safe, green and active
Providing infrastructure to support the economy
Remaining financially sustainable to deliver these service priorities

6. COMMUNITY ENGAGEMENT AND INFORMATION

- 6.1 The carbon emissions targets for RBC are defined in the Climate Change Strategy 2013-2020. This was widely consulted on, and is a partnership strategy with public sector, business and the community. It received cross-party support.
- 6.2 This internal Carbon Plan has been consulted on with relevant officers, particularly Property Services, Facilities Management, relevant Services and Education.
- 6.3 Reading Borough Council is required to report its annual carbon emissions to the Department of Energy and Climate Change. The authority's Greenhouse Gas Protocol (GHG) report is publically available and published on the council's website. The carbon emissions from the wider Council's activities (called Scope 3) are also reported here, including Reading Transport Ltd.

7. EQUALITY IMPACT ASSESSMENT

- 7.1 An Equalities Impact Assessment is not required

8. LEGAL IMPLICATIONS

- 8.1 Further investment will require approval through appropriate Committees for key decisions, which will be taken in compliance with the Council's Standing Orders.
- 8.2 Reading Borough Council is required to undertake energy assessments and certifications (e.g. Display Energy Certificates and Air Conditioning assessments) in accordance with the Energy Performance of Buildings Regulations 2007.

9. FINANCIAL IMPLICATIONS

- 9.1 The Carbon Plan will require further funding within the term of the plan. The Carbon Plan sets out the potential routes for investment to achieve energy and water savings, and meet the carbon reduction targets set in the Climate Change Strategy 2013-2020. The actions set out the early schedule for the development of business cases. Further significant investment will require separate business cases and individual permissions will be sought and appropriate procurement routes followed.

Salix funded projects are required to meet Salix Finance investment criteria, such as payback period under 7.5 years (dependent on technology) and £100 investment per tonne of CO₂ saved over the lifetime of the technology. The 48 corporate projects to date have an average pay back period of 3.5 years. The annual fund available for Salix energy efficiency projects is £250k.

The Council currently benefits from income from government renewable incentive schemes, the Feed in Tariff for solar PV electricity generation, which to date generates around £120k per year. Additional Feed in Tariff income is due to come from the solar pv systems at the Civic Offices and on Council houses. Any consideration of further renewable technology installation will offer the opportunity for income, subject to the government continuing to provide the incentive schemes.

Department for Transport Challenge Fund funding, secured for upgrading street lighting, will have investment rules to adhere to. Once these terms and conditions have been received the more detailed programme of investment can be fully determined.

To date, all business cases for projects have required that costs have been covered by savings within the life cycle of the project. This will continue to be applied to new business cases.

Provision has been made within the Capital Programme for investment in energy efficiency and renewables, to enable investment as satisfactory business cases are brought forward.

10. BACKGROUND PAPERS

- 10.1 The Carbon Plan, 2015-2020: *Managing energy and water to deliver a low carbon future for Reading Borough Council*
- 10.2 Reading's Local Authority Carbon Management Plan (LACM) 2007
- 10.3 Reading's Climate Change Strategy 2008-2013: *Stepping forward for Climate Change*
- 10.4 Reading's Climate Change Strategy 2013-2020: *Reading Means Business on Climate Change*