

CABINET – 15 NOVEMBER 2011**REPORT OF THE DIRECTOR OF ENVIRONMENT AND
TRANSPORT****CARBON MANAGEMENT PLAN REVIEW****PART A****Purpose of Report**

1. To seek approval of the Carbon Management Plan (appended to this report).

Recommendations

2. The Cabinet is recommended to note the outcome of the Carbon Management Plan Review and approve the revised Carbon Management Plan 2009 to 2020.

Reasons for Recommendations

3. The implementation of the Carbon Management Plan is included as an action to be undertaken in the Environment Strategy. The Carbon Management Plan outlines the County Council's approach and its plans for reducing carbon emissions to mitigate against climate change.

Timetable for Decisions (including Scrutiny)

4. The Scrutiny Commission will have considered the Carbon Management Plan Review at its meeting on the 9th November 2011 and its conclusions will be reported to this meeting.
5. The Carbon Management Plan review is timely as the authority is now at the mid point of the original 5 year Carbon Management Plan timetable, with results for the first two years now being available.

Policy Framework and Previous Decisions

6. At its meeting on 13 January 2009 the Cabinet resolved:
 - (a) That the ongoing work of the Carbon Management Programme Board and the Energy Management Team to baseline and reduce, on a long term basis, the County Council's carbon emissions be supported;
 - (b) That following the County Council's decision in December 2006 to sign the Nottingham Declaration on Climate Change on an all party basis and move forward with the environment agenda, the ongoing contribution made by this Review Panel since July 2007 to reviewing and improving the County Council's environmental performance be welcomed;
7. At its meeting on 7 April 2009 the Cabinet resolved to approve the Carbon Management Plan.
8. At its meeting on the 28th September 2011 the County Council approved the Environment Strategy which includes a target to reduce Carbon emissions by the Authority.

Resource Implications

9. The financial implications of delivering the 34% carbon target are estimated at £29.6m capital investment (£18.3 m already invested through existing and funded projects such as new school buildings, boiler replacements and the office accommodation strategy). Of the remaining unidentified £11.3m, £7.7m would be needed to develop renewable energy capacity, £1.6m for energy efficiency in the corporate estate and £2m for energy efficiency in school buildings.
10. The potential financial savings at the end of the plan period are estimated at almost £7m per year (£3.7m from the corporate estate and transport and £3.3m from the schools estate). The cost of prudential borrowing has not been included in the gross savings from projects.
11. Continuing to deliver and if possible accelerate the delivery of carbon emission reductions will reduce County Council energy and fuel consumption costs and the purchase of Carbon Reduction Commitment – Energy Efficiency Scheme allowances, against the Business as Usual scenario. Taking the projected 2011/12 cost of £8.1m for Corporate energy and fuel consumption, even a 10% reduction could deliver £810k of savings.

12. For Corporate projects, finance is available from Salix Funding and other internal resources already allocated to energy efficiency. The Salix Fund stands at £839,000 with an available balance of £41,000. Internal resources stand at £550,000 with an available balance of £422,000. These are both revolving funds and repayments currently due in 2012/13, and therefore available in that year, amount to £169,000. Further investment in energy measures beyond existing projects would have to be found within the resources available in the Medium Term Financial Plan 2012 – 2016 and be subject to a robust business case being in place. Investment of capital in schools' energy improvements is expected to change as a result of the Government's proposals for change in schools' governance arrangements.
13. The Director of Corporate Resources has been consulted on this report and the Carbon Management Plan.

Circulation Under the Local Issues Alert Procedure

14. None

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PART B

Background

15. A number of changes to the Carbon Plan are proposed which are summarised below.

Timescale.

16. The Carbon Management Plan was approved by Cabinet in April 2009. The plan, in line with the Environment Strategy 2009 – 2020, included a target to reduce carbon emissions from the Council's activities by 30%, compared to 2008/09, by 2013/14. In 2009/10 the Council achieved a 2.7% reduction against the 2008/09 baseline; however, emissions have increased during 2010/11 by 1.5% resulting in an overall reduction of only 1.2% compared to the baseline. The changes by emissions source are summarised in Table 1 below.

Table 1 Carbon Emissions by sources 2008/09 to 2010/11

	2008/2009 (tCO₂)	2009/2010 (tCO₂)	% annual change	2010/11 (tCO₂)	% annual change	% change against baseline	% of total in 2010/11
Business Mileage	3,390	3,348	-1.2%	3,094	-7.6%	-8.8%	3.9%
Fleet	4,437	4,645	4.7%	3,585	-22.8%	-19.2%	4.5%
LCC Corporate Buildings	12,944	12,879	-0.5%	13,912	8.0%	7.4%	17.3%
Schools	44,000	41,334	-6.0%	41,951	1.5%	-4.7%	52.3%
Street lighting	16,428	16,791	2.2%	17,675	5.3%	7.6%	22.0%
GRAND TOTAL	81,200	78,997	-2.7%	80,217	1.5%	-1.2%	100.00%

17. The reasons for the level of carbon reductions being less than expected appear to be based on a number of factors which include:

- More accurate measurement - with the stronger focus on energy data our inventory and statistics are now much fuller;
- The Authority's trajectory of energy demand was clearly higher than understood and it has taken more to turn the trajectory than expected;
- The carbon content of the national grid was higher than the baseline year because there was less nuclear power, and therefore more coal used than in the previous year;
- Whilst significant projects have been delivered they will only start to deliver full year benefits in 2011/12

18. Many of the actions from the original plan have been completed, abandoned or superseded requiring a review of the plan and the

identification of further carbon reduction opportunities. A review of the County Council's operations and estate has been completed in consultation with services to identify additional carbon saving opportunities. Tools provided by the Carbon Trust have been used to make 'rule-of-thumb' assessments on carbon reduction opportunities in buildings, fleet and renewable energy where more detailed assessments were not available.

19. The 34% carbon reduction target requires savings of over 27,000 tCO₂ (Tonnes of Carbon Dioxide) to be identified in addition to the reductions achieved up to 2010/11. A summary of the costs and carbon and financial savings from projects in the reviewed Plan are outlined in Table 2. However, due to the high level assessment of the costs and savings available from the medium to long term projects including Renewable Energy opportunities, 40% of the carbon savings identified are considered at high risk of not being delivered. This highlights the need for close monitoring of the implementation and actual savings from projects to ensure the Council remains on track to meet its 34% target.
20. Given these circumstances it is considered that whilst the scale of the emissions reduction target is still appropriate from the point of view of both carbon and cost reductions, the timescale is now unrealistic. A figure of 34% by 2020/21 is more appropriate and is in accord with the Government's target for the UK, albeit the Government target is against a 1990 baseline, so the County Council target remains more challenging.

Schools

21. The changes proposed to the governance of schools as a result of the Government's academies programme, and the uncertain rate of transition of schools to academies, raise questions about the inclusion of schools within the programme of proposed improvements. The County Council is currently formally responsible for the Carbon Reduction Commitment – Energy Efficiency Scheme payments for schools and academies, as well as corporate buildings, and whilst the Government has consulted on changing these arrangements it is by no means clear if or when this responsibility will be changed. Notwithstanding the Government's position, and the current wording of Carbon Reduction Commitment – Energy Efficiency Scheme Regulations, it is clear that this Authority, having no responsibility for, or authority over, academy schools, cannot be held responsible for the carbon emissions of academy schools.
22. Given the uncertainties this creates, the Carbon Plan has been presented with the schools information provided separately. For planning purposes therefore, the 34% reduction target within the Carbon Plan still applies to schools and academies as well as corporate buildings, street lighting and travel. This does mean though

that the carbon reductions ascribed to schools in the plan can only be an advisory figure calculated against the programme of schemes identified in the Plan and assuming they are implemented.

23. In the meantime the Authority has launched the Schools Collaboration on Resource Efficiency (SCoRE) scheme in 21 schools in Leicestershire helping to provide directed support to focus on their energy, water and waste. This project, working with Climate East Midlands, the Carbon Trust, and Briar Associates, helps indicate that while there may be changes in specific statutory responsibilities there will still be a need to demonstrate continuing community leadership to schools on climate change issues.
24. To meet the 34% carbon reduction target across the full scope of the Plan, (including schools), requires the implementation of over one hundred projects and a capital investment of £29.6m by 2020 (£18.3m of which has already been committed). If the Authority was to focus on the Corporate estate to maximise the return on its investment a 42% carbon reduction on the Corporate only baseline has been identified through energy efficiency and renewable energy development requiring £9.3m capital investment.

Renewable Energy

25. In any programme of carbon reduction it is appropriate first to focus on energy efficiency measures and only subsequently to consider renewable energy generation. Even within the proposed revised timetable, the opportunity from energy efficiency alone is unlikely to provide the full 34% carbon reduction. Despite reviewing the complete operations and estate of the Council, it was only possible to identify 80% of the target carbon savings through these means; the remaining 20% will require a shift to renewable energy investment. The appropriate technologies that are deliverable within the timescale will include measures such as photovoltaic panels, solar panels, bio fuels and anaerobic digestion. Whilst wind energy could provide a significant contribution it is unlikely to figure significantly within the timescale to 2020.
26. Table 2 shows that a 31% carbon emission reduction on the 08/09 has been identified through the projects in the plan. The remaining savings will be made through long term projects that cannot be accurately quantified at this point and a reduction in the carbon intensity of grid electricity.

Table 2 Summary of Carbon Plan financial costs and carbon savings

	Cost		Annual Savings (yr 1)		% of baseline
	Capital	Operational	Financial (Gross)	tCO ₂	
	Corporate	£3,928,495	£484,150	£2,201,257	
Schools	£17,926,457	£85,300	£1,654,262	9660	11.7%
Renewables	£7,748,234	£0	£866,899	4771	5.8%
TOTAL	£29,603,186	£569,450	£4,722,418	25555	31%

Latent demand

27. Despite having implemented existing projects which represent a 9% carbon saving against the baseline, the actual reduction in the Council's emissions between 2008-09 and 2010-11 has been only 1.2%. This would suggest that, in conflict with the authority's carbon saving initiatives, there remains a growth in the demand for energy which is adding to the overall carbon load. The Carbon Trust recommends the use of an assumed 0.7% Business as Usual annual demand increase for energy and fuel, resulting in a 7% rise over the period of the plan and a relative emissions reduction target for the County Council of 39% to compensate for the demand increases by 2020. The Embedding Action Plan of the Carbon Management Plan (Section 6) aims to reduce this effect.

Behavioural Change

28. The original plan assumed a 10% carbon saving across all buildings energy use from energy awareness and monitoring and targeting. The level of investment in this area of work for the first two years of the plan period has been insufficient to deliver this level of savings.

Street Lighting

29. The existing Energy Saving from Street Lighting programme offers a 3% carbon reduction against the authority's 08/09 baseline when fully implemented. Whilst lighting stock inventory does increase year on year the existing programme is on track and has now caught up from the natural stock increase and is producing overall energy demand decreases. Opportunities exist to make further savings from the lighting stock and are most likely to be delivered beyond March 2014.

Carbon Reduction Commitment – Energy Efficiency Scheme

30. The purchase of allowances for the Carbon Reduction Commitment Energy Efficiency Scheme for 2011/12 is likely to be approximately £900k. It is anticipated that the cost of allowances is set to escalate

from the current £12 per tonne to £16 – £20 per tonne in the early years of the scheme representing a potential additional cost of £300k - £600k in the future.

Technical content

31. The technical content of the summary Carbon Plan has been significantly simplified. Full copies of the technical document are available on request.

Relevant Impact Assessments

Equal Opportunities Implications

15. The Carbon Management Plan will include all County Council staff in reducing the Council's carbon footprint.

Environmental Implications

16. Implementation of the Carbon Management Plan will reduce the Council's carbon emissions and its impact on the environment.

Risk Assessment

17. The Carbon Management Plan is pivotal to the delivery of the Environment Strategy. The Plan outlines the County Council's approach to delivering an improved response to climate change, a priority outcome of the Sustainable Community Strategy.

Background Papers

18. Leicestershire County Council Environment Strategy 2011 – 2020; Sustainable Community Strategy for Leicestershire 2008 - 2013 ; Nottingham Declaration on Climate Change.

Appendix

Carbon Management Plan 2009 to 2020