

09 October 2014

Agenda Item: 6

REPORT OF THE SERVICE DIRECTOR FOR TRANSPORT, PROPERTY AND ENVIRONMENT

PERFORMANCE REPORT – ENERGY AND CARBON MANAGEMENT – 2013-14 OUT-TURN

Purpose of the Report

1. This report provides information to the Committee on the performance of the energy and carbon management service for the 2013-14 financial year.

Information and Advice

2. The energy and carbon management function provides a service on behalf of the Council's corporate estate, including schools, to ensure supply of electricity, gas and wood fuel is available at competitive rates; to promote and support investment in energy efficiency measures; to support investment in renewable energy technologies; to ensure compliance with energy-related legislation and to manage consumption data to enable effective monitoring, forecasting and reporting.
3. Performance measurement on energy and carbon management has been subject to changing central government requirements and legislation. The Council is currently obliged to report its annual carbon emissions under the Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES), and is also required by the Department of Energy and Climate Change (DECC) to report and publish its greenhouse gas emissions. In addition, Council buildings over 500m² are subject to legislation requiring them to be assessed for their energy performance, resulting in a Display Energy Certificate (DEC) showing a rating from A to G, which needs to be displayed in a prominent place.
4. CRCEES performance and the Council's local greenhouse gas emissions report are only reported annually. Due to the burden of reporting under the CRCEES, the Council has taken the decision to limit its greenhouse gas emissions report to those emissions covered by the CRCEES, which as of April 2014 now include those from energy use in street lighting in addition to emissions from Council buildings.
5. Further to the above, from April 2014 the service will also be measuring the change in the average annual Display Energy Certificate (DEC) ratings for its buildings over 1000m², which has been adopted as measure for the Council's delivery plan.
6. The total annual costs for electricity and gas for the Council's properties and street lighting for 2013-14 were about £17.2million, of which the schools (and Academies) share was £10.2million, and that for street lighting and signals £4.6million. Crown Commercial Services

(CCS, formerly GPS – Government Procurement Service), the Council's appointed central purchasing body for gas and electricity, continued to deliver better than average market prices for the Council's energy supplies.

7. A summary of performance is detailed in Appendix 1. This indicates that overall performance for the service is still good, with a wide range of renewable technology initiatives being installed across the corporate estate and high take up of the Local Authority Energy Finance (LAEF) funding scheme. There has also been a welcome decrease of 6.7% in the reported carbon emissions from the Council's buildings compared to 2012-13, and a 3% decrease in those from street lighting, highway signs and signals. The table below details reported carbon emissions over the past four years. It also shows the weather corrected figures for buildings, which is an accepted way of excluding the effect of variations in external temperatures on heating energy consumption.

County Council carbon emissions			
Year	Reported emissions from energy use in buildings (weather corrected figures in brackets)	Emissions from energy use in street lighting, signs and signals	Total (tonnes)
2010-11	78,579 (76,635)	24,619	103,198
2011-12	67,453 (72,404)	24,515	91,968
2012-13	73,400 (70,030)	24,772	98,172
2013-14	68,473 (69,543)	23,981	92,454

Analysis

8. The decrease in reported carbon emissions from buildings compared to 2012-13 is considered to be largely due to a milder winter than the previous year, coupled with some property rationalisation and the impact of energy efficiency measures. With much of the Council's energy use being for space heating, weather is a strong factor in determining overall energy consumption in any one year. This is supported by the weather-corrected emissions data, which show that when the effect of weather on emissions is taken into account, a year on year decrease in emissions from County Council buildings has been achieved. It is hoped that ongoing building rationalisation combined with further renewable energy investment and improvements in energy efficiency, will help sustain this downward trend in emissions.
9. Indicators included in **Appendix 1** show that:
- the Council's investment in photovoltaic arrays on its buildings is giving a return on investment of 13%, with income received through Feed in Tariff payments for 2013-14 totalling £72,507 and avoided energy costs amounting to £22,695; and
 - investment last year through the Council's revolving energy efficiency loan fund will save an additional £74,599 p.a. in avoided energy costs, bringing the total annual energy cost savings funded by the scheme to over £465,000.

10. Emissions for street lighting, signs and signals are less subject to weather patterns. Action to improve performance in this area primarily rests with Highways where, in addition to the part-night lighting programme, there is now an additional £1.8 million investment programme in part night dimming and LED lighting, which combined is set to deliver an energy cost saving of around £1.5million by April 2017.
11. The Energy and Carbon Management team were central in securing this £1.8m investment by way of obtaining an interest free loan through the SEELS programme, delivered by SALIX, the Council's funding partner in the Local Authority Energy Fund (LAEF). Our existing relationship with SALIX, and our success in utilising the current LAEF effectively, was fundamental in us being able to secure the SEELS funding. The Council has been recognised by Salix Finance for its high level of performance in 2013-14, being ranked 12th or higher out of 132 public sector bodies, in 5 out of 7 of the performance measures used by Salix.

Cost implications

12. For every tonne of carbon emitted under the CRCEES in 2013-14 the Council is obliged to pay £12, amounting to £821,676. As of this financial year, the cost per tonne will rise to £16, and then in line with RPI thereafter. Other changes to the scheme see the exclusion of emissions from schools but the inclusion of emissions from street lighting. The net effect of these changes is predicted to be a saving to the Council of about £150,000. Carbon costs for 2013-14 are summarised in the table below.

Cost of carbon emissions for 2013-14 under the CRCEES		
	Carbon emissions (tonnes)	Cost (£)
Schools	51,808	621,696
Corporate	13,839	166,068
Pensions portfolio	2,826	33,912
Total	68,473	821,676

13. Although the cost of carbon is significant, it should be noted that for every tonne of carbon emitted, the Council will have spent more than ten times that on the energy cost. Looking at the total cost of energy for our buildings (including schools, but excluding street lighting) for 2013-14 of around £12.6million, the average energy cost per tonne of carbon emitted is about £180. Put another way, every tonne of carbon saved is roughly worth an additional £180 in saved energy costs.

Other Options Considered

14. None – this is a report for noting only.

Reasons for Recommendations

15. Energy and carbon management is a significant area of spend for the Council, and has a major impact on the environmental and economic well being of the County. It is essential therefore that the Environment and Sustainability Committee is fully briefed on issues which impact on the delivery of the service.

Statutory and Policy Implications

16. This report has been compiled after consideration of implications in respect of finance, equal opportunities, human resources, crime and disorder, human rights, the safeguarding of

children, sustainability and the environment and those using the service and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

Implications for Service Users

17. Performance in this service area has a major impact on schools in Nottinghamshire, with 99% of state schools buying electricity and gas through the Council's electricity and gas supply contracts. For schools and non school sites alike, good energy management and sensible investment can help limit the impacts of the predicted upward trend in energy costs and even yield budget savings, in addition to the environmental benefits accrued from reducing carbon emissions and pollution associated with the use of fossil fuels.

Recommendation

18. That Committee notes the contents of the report.

Mick Allen

Group Manager, Waste and Energy Management

For any enquiries about this report please contact:

Mick Allen, Group Manager, Waste and Energy Management

Constitutional Comments (SLB 18/09/2014)

19. This report is for noting only.

Financial Comments (TMR 16/09/14)

20. The financial implications are as set out in the report.

Background Papers

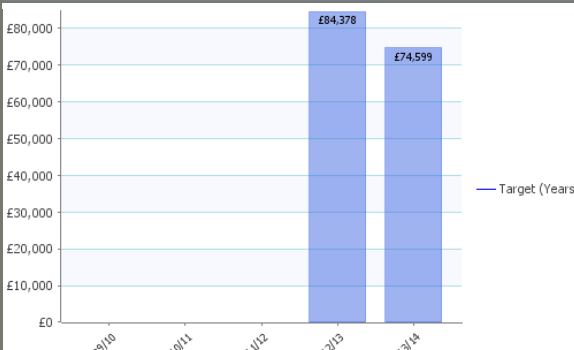
The County Council's local greenhouse gas emissions report can be found at <http://www.nottinghamshire.gov.uk/enjoying/countryside/energy-and-carbon-management/climate-change/>

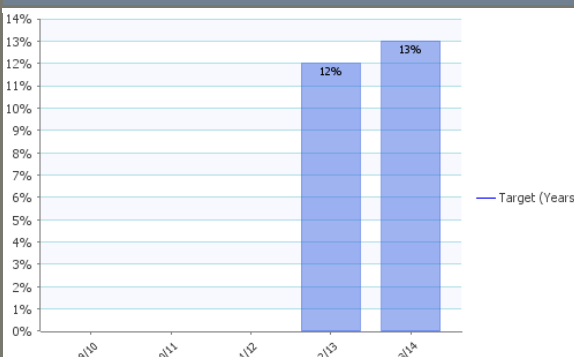
Electoral Divisions

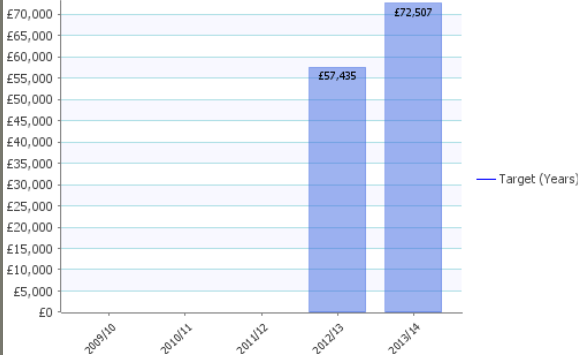
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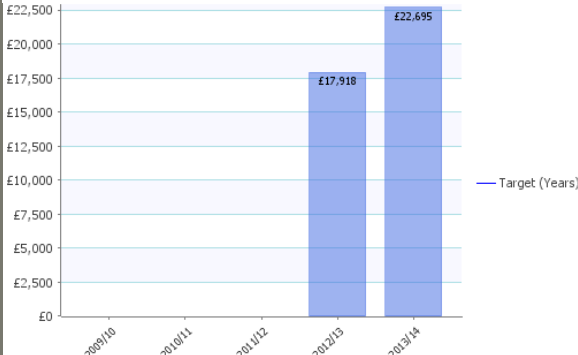
Appendix 1 - Energy and Carbon Management Performance Report 2013/14

Finance

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements
Effectiveness of our Energy efficiency recycling fund (Salix) - annual energy savings	Aim to Maximise	<p>Actual £74,599</p> <p>Target None</p>		<p>£74,599 for investment in 2013-14.</p> <p>The amount available to invest in energy saving measures varies from year to year, as it depends on the value of loan repayments returning to the fund. The Council has been recognised for its high level of performance in 2013-14 by Salix Finance, being ranked 12th or higher out of 132 public sector bodies, in 5 out of 7 of the performance measures used by Salix.</p>

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements
Energy Management - Annual Income Generation - Return on Investment from photo voltaic cells	Aim to Maximise	<p>Actual 13%</p> <p>Target None</p>		<p>13% for annual return in 2013-14 from our PV investment.</p> <p>Although Feed in Tariff rates have reduced, the cost of installation has generally fallen, owing to reduced technology costs, giving the same sort of RoI. It is unlikely that returns will get any better than 13%.</p>

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements
Energy Management - Annual Income Generation from photo voltaic cells	Aim to Maximise	<p>Actual</p> <p>£72,507</p> <p>Target</p> <p>(a target of £80,000 has been set for 2014-15)</p>	 <p>£72,507 income for 2013-14</p> <p>2014-15 should see an increase as more PV arrays are installed.</p>	

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements
Energy Management - Annual Income Generation - Energy Cost Savings	Aim to Maximise	<p>Actual</p> <p>£22,695</p> <p>Target</p> <p>None</p>	 <p>£22,695 for 2013-14, energy cost savings from PV installs.</p> <p>2014-15 should see an increase as more PV arrays are installed, and more savings are made by using on site generated electricity.</p>	

Performance

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements										
Total Emissions - Excluding Transport (tonnes)	Aim to Minimise	<div><div>Actual</div><div>92,454</div><div>Target</div><div>None</div></div>	<table><thead><tr><th>Year</th><th>Actual (tonnes)</th></tr></thead><tbody><tr><td>2009/10</td><td>103,198</td></tr><tr><td>2010/11</td><td>91,968</td></tr><tr><td>2011/12</td><td>98,172</td></tr><tr><td>2012/13</td><td>92,454</td></tr></tbody></table>	Year	Actual (tonnes)	2009/10	103,198	2010/11	91,968	2011/12	98,172	2012/13	92,454	2013-14 emissions total 92,454 tonnes
Year	Actual (tonnes)													
2009/10	103,198													
2010/11	91,968													
2011/12	98,172													
2012/13	92,454													

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements												
Emissions from street lighting , traffic signals and signs	Aim to Minimise	<div><div>Actual</div><div>23,981</div><div>Target</div><div>None</div></div>	<div><table><thead><tr><th>Year</th><th>Actual (tonnes)</th></tr></thead><tbody><tr><td>2009/10</td><td>24,619</td></tr><tr><td>2010/11</td><td>24,515</td></tr><tr><td>2011/12</td><td>24,772</td></tr><tr><td>2012/13</td><td>24,772</td></tr><tr><td>2013/14</td><td>23,981</td></tr></tbody></table></div>	Year	Actual (tonnes)	2009/10	24,619	2010/11	24,515	2011/12	24,772	2012/13	24,772	2013/14	23,981	2013-14 emissions from street lighting total 23,981 tonnes, compared to 24,772 tonnes for the previous year. This reduction of 3.2% is associated with an ongoing energy saving programme.
Year	Actual (tonnes)															
2009/10	24,619															
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2013/14	23,981															

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements														
CO2 emissions - annual reductions	Aim to Minimise	<div><div>Actual</div><div>5.8%</div><div>Target</div><div>3%</div></div>	<table><thead><tr><th>Year</th><th>Value</th></tr></thead><tbody><tr><td>2009/10</td><td>-</td></tr><tr><td>2010/11</td><td>-</td></tr><tr><td>2011/12</td><td>-10.88%</td></tr><tr><td>2012/13</td><td>6.75%</td></tr><tr><td>2013/14</td><td>5.8%</td></tr><tr><td>Target (Years)</td><td>3%</td></tr></tbody></table>	Year	Value	2009/10	-	2010/11	-	2011/12	-10.88%	2012/13	6.75%	2013/14	5.8%	Target (Years)	3%	Reduction in total emissions from previous year is 5.8%
Year	Value																	
2009/10	-																	
2010/11	-																	
2011/12	-10.88%																	
2012/13	6.75%																	
2013/14	5.8%																	
Target (Years)	3%																	

Indicator	Maximise or Minimise	Actual Versus Target	Trend Chart	Improvements														
Total weather corrected carbon emissions from Council buildings	Aim to Minimise	<div>Actual</div> <div>69,543</div> <div>Target</div> <div>None</div>	<table><thead><tr><th>Year</th><th>Value</th></tr></thead><tbody><tr><td>2009/10</td><td>78,579</td></tr><tr><td>2010/11</td><td>76,635</td></tr><tr><td>2011/12</td><td>72,404</td></tr><tr><td>2012/13</td><td>70,030</td></tr><tr><td>2013/14</td><td>69,543</td></tr><tr><td>Target (Years)</td><td>68,573</td></tr></tbody></table>	Year	Value	2009/10	78,579	2010/11	76,635	2011/12	72,404	2012/13	70,030	2013/14	69,543	Target (Years)	68,573	<p>Our carbon emissions for the financial year 2013-14 arising from the use of energy in our buildings (including schools), as declared in our annual report under the Government's Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES) amount to 68,573 tonnes of carbon dioxide.</p> <p>This is a decrease of 4,927 tonnes (6.7%) compared with 2012-13, which is largely due to a milder winter than the previous year coupled with some property rationalisation and energy efficiency measures.</p> <p>Weather corrected, these emissions for 2013-14 only show a slight decrease compared to 2012-13.</p>
Year	Value																	
2009/10	78,579																	
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