

19 November 2015**Agenda Item: 4****REPORT OF THE SERVICE DIRECTOR FOR TRANSPORT, PROPERTY AND
ENVIRONMENT****PERFORMANCE REPORT – ENERGY AND CARBON MANAGEMENT –
2014-15 OUTTURN****Purpose of the Report**

1. This report provides information on the Council's energy and carbon management performance for the 2014-15 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 over recent years 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 in floor area 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 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 now include those from energy use in street lighting in addition to emissions from Council buildings.
5. Further to the above, the energy and carbon management service is also measuring the change in the average annual DEC score for non-school Council buildings over 1000m², which has been adopted as measure of environmental performance for the Council's delivery plan.
6. The total annual costs for electricity and gas for the Council's properties and street lighting for 2014-15 were about £16.2million, of which the schools (and Academies) share was

£9.3million, and that for street lighting and signals £4.5million. Crown Commercial Services (CCS, formerly GPS – Government Procurement Service), the Council's appointed central purchasing body for gas and electricity, continues to deliver better than average market prices for the Council's energy supplies.

7. A summary of key performance data is detailed in Appendix 1. This indicates that overall performance for the service is still good, with a range of renewable technology initiatives being installed across the corporate estate and high take up of the Local Authority Energy Finance (LAEF) funding scheme for quick payback energy efficiency measures. There has also been a welcome decrease of 13% in the carbon emissions from the Council's buildings compared to 2013-14, and a 14% decrease in those from street lighting, highway signs and signals.
8. The table below shows the County Council's carbon emissions from its buildings and street lighting over the last 5 years, with those from its buildings corrected to take account of the effect of weather on energy consumption, making year on year comparisons more meaningful. Note that for phase 2 of the CRCEES emissions from school are excluded, whilst those from street lighting are now included

County Council carbon emissions (tonnes)							
Year and phase of CRCEES	Buildings (weather corrected figures shown in brackets)				Street lighting	Total	Emissions reported under CRCEES
	Schools	Non-schools	Pension portfolio	Total			
2010-11 Phase 1	56,311 (54,918)	18,201 (17,751)	4,066 (3,966)	78,579 (76,635)	24,619	103,198	78,579
2011-12 Phase 1	48,983 (52,843)	15,693 (16,684)	2,777 (2,877)	67,453 (72,404)	24,515	91,968	67,453
2012-13 Phase 1	55,228 (52,503)	15,434 (14,875)	2,738 (2,671)	73,400 (70,030)	24,772	98,172	73,400
2013-14 Phase 1	51,809 (53,745)	13,837 (14,232)	2,825 (2,889)	68,473 (69,543)	23,981	92,454	68,471
2014-15 Phase 2	45,375 (48,519)	13,014 (13,735)	1,882 (1,941)	60,271 (64,195)	20,533	80,804	36,310

9. In addition to this, Committee may like to note that up to the end of March 2015, the Council's recycling energy efficiency fund (LAEF scheme) has invested over £2.2m in Council buildings (including schools) and street lighting, yielding annual savings of over £0.5m and 3,000 tonnes of carbon dioxide. The fund has £478,320 available to invest in further quick payback energy efficiency measures in 2015-16 and a promising pipeline of projects in place.

Analysis

10. The decrease in carbon emissions from buildings compared to 2013-14 is considered to be largely due to a combination of changes to nationally set conversion factors (adjusted to

reflect the increasing decarbonisation of grid electricity), changes to the Council's property portfolio and investment in energy efficiency and renewable energy. The introduction of the new indicator measuring the average DEC score would suggest that energy efficiency investment and building energy management in general have had more of a minor impact as the overall operational energy efficiency of these larger buildings has only showed a slight improvement. The change in the average DEC score for the Council's non-school buildings of 1000m² floor area or above shows an improvement (a reduction) of 2.8% (105 in 2014/15 compared to 108 in 2014/13). It is however a mixed picture with 13 buildings showing an improved score and 11 showing a worse score. These larger buildings are ones which are required to have an annually renewed DEC and together account for 54% of the total energy consumed by the Council's non-school buildings. A DEC measures the operational energy performance of a building and improvement over time would indicate improvement in energy management, either by reducing consumption or carbon emissions, or both.

11. Income received through Feed in Tariff payments for electricity generated by solar (PV) arrays on Council buildings for 2014-15 amounted to £65,401. This figure is a bit less than expected as it only shows 11 months of income for some sites due to rationalising the frequency of our meter reading submissions, whilst with some new installations we experienced delays in registering with Ofgem, with the arrays also needing to generate for 83 days from the opening meter reading before the first payment. Savings from on-site consumed electricity from these panels amounted to £18,012.
12. Action to improve performance in the emissions from energy used in street lighting, signs and signals rests with Highways, who the Energy and Carbon Management team have assisted to access a further loans from Salix Finance of £3.6million spread over 4 years, to accelerate the conversion of street lights to LED lanterns throughout the county.
13. The County Council is also implementing a programme of support and further investment as detailed in the Energy Opportunities Update report presented to this Committee on 3 September 2015. This includes a rolling programme of roof mounted PV installations, Additional Capital for Energy (ACE) spend across the corporate estate, LAEF investments, and feasibility work on large scale projects for river heat and/or biomass gasification at County Hall, and ground mounted solar, although changes to government incentives for renewable technologies are making investment decisions on these the projects difficult to make at this time.

Cost implications

14. Every tonne of carbon emitted under the CRCEES incurs a cost to the Council. Under Phase 2 of this Scheme the Council has been able to take advantage of a discounted advanced purchase price of £15.60 per tonne (compared to £16.40) for buying its allowances for 2015-16. Any surplus allowances beyond those that need to be surrendered to meet the reported emissions can be 'banked' for use in future years. The cost per tonne is set to rise for each year of Phase 2, with the rise expected to be in line with RPI, and therefore any carbon savings become increasingly valuable.

Cost of carbon emissions for 2014-15 under the CRCEES		
Source	Carbon emissions (tonnes)	Cost (£)
Corporate estate	12,101	188,776
Pensions portfolio	1,881	29,344
Street lighting	22,328	348,317
Total	36,310	566,437

15. 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 (excluding schools) and street lighting, of around £6.9million, the average energy cost per tonne of carbon emitted is about £190. Put another way, every tonne of carbon saved is roughly worth an additional £190 in saved energy costs.

Other Options Considered

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

Reasons for Recommendations

17. 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

18. 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

19. Performance in this service area has a major impact on schools in Nottinghamshire, with over 90% 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

20. That Committee notes the contents of the report.

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For any enquiries about this report please contact:

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Constitutional Comments

21. This report is for noting only.

Financial Comments

22. 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://site.nottinghamshire.gov.uk/thecouncil/plans/councilplansandpolicies/policy-library/?entryid100=541781&q=11026943~greenhouse~11026959~Countryside+and+Environment~>

Energy Opportunities Update report presented to Environment and Sustainability Committee on 3 September 2015.

Electoral Divisions

All