Nottinghamshire County Council

Report to Finance & Property Committee

23 February 2015

Agenda Item:7h

REPORT OF SERVICE DIRECTOR TRANSPORT, PROPERTY & ENVIRONMENT

ENERGY COSTS AND PROCUREMENT

Purpose of the Report

1. The purpose of this report is to:

   - update Committee with regard to the procurement of energy for the Council's buildings and street lighting;
   - update on projected costs of energy for this financial year and advise on estimated costs for the 2015-16 financial year;
   - report on the Council's carbon emissions and costs associated with mandatory participation in the Carbon Reduction Commitment Energy Efficiency Scheme; and
   - provide a brief update on current carbon and energy cost saving measures.

Information and Advice

Energy procurement

2. This report updates information reported to this Committee on 20 January 2014 and relates to energy and carbon management performance reported to Environment and Sustainability Committee on 9 October 2014.

3. Some of the Council's energy supplies, covering about 70% of its consumption for street lighting and buildings, are purchased under a flexible, variable procurement model, whereby energy is purchased in advance of and during the supply period (financial year). The remaining 30% is purchased prior to the supply period. This should be borne in mind when noting the predicted energy costs in the following section.

4. Procurement of gas and electricity takes place through the Council's appointed central purchasing body, Crown Commercial Service, (CCS - formerly known as Government Procurement Service, GPS). The supply contracts for gas and electricity are also made available to state schools in Nottinghamshire through a participation agreement, which virtually all schools take advantage of. The CCS performance review for 2013-14 shows that for the energy baskets from which the Council's supplies are procured, CCS continues to achieve better than average wholesale market prices, with electricity up to 4%, and gas around 0.5% better.

Energy costs

5. Table 1, below, shows the predicted energy costs (electricity and gas combined) for this and next financial year, compared to actual costs for 2012-13 and 2013-14 for the current contract portfolio. Overall, predictions for next financial year show a slight increase in costs for buildings and traffic signals, with an average increase of around 3% for electricity and a 1% decrease in gas prices. Costs for street lighting are predicted to fall by about 3%, giving an overall predicted reduction to the Council's energy costs of 2%.

Table 1. Summary of predicted electricity and gas costs for 2014-15 and 2015-16

	2012- 13 actual	2013-14 actual	2014-15 predicted	2015-16 predicted	Difference compared to 2014-15 (% change in brackets)
Schools*	£9,084,452	£8,587,281	£8,662,381	£8,772,601	£110,220 (1%)
Traffic signals	£307,621	£373,926	£317,155	£321,027	£3,872 (1%)
Street lighting	£4,125,946	£4,169,074	£4,111,757	£3,976,517	-£135,240 (-3%)
Council buildings	£2,421,981	£2,391,752	£2,359,015	£2,387,510	£28,495 (1%)
Total cost excluding schools	£6,855,549	£6,934,753	£6,787,927	£6,685,054	-£102,873 (-2%)

*Schools meet their own energy costs

6. Members should be aware that these predicted costs are very much best estimate figures based on average consumption over the past three years, predicted prices and the limited amount of energy purchased in advance, with many variable factors that can influence actual costs. Street lighting and traffic signals comprise around 30% of the Council's combined electricity and gas costs, but despite an increase to the electricity prices, the overall cost for street lighting is predicted to fall as a result of energy efficient lighting replacement and part night dimming programmes.

7. It is also important to recognise that about 40% of a typical energy bill is made up of non-energy costs so, regardless of changes to wholesale prices, costs will also be affected by changes to transmission, distribution and other non-commodity elements of electricity and gas bills.

Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES)

8. Reducing emissions of carbon dioxide (the main greenhouse gas), including those from the Council's own estate and operations, is one of the Council's Strategic Plan priorities. Carbon emissions for the financial year 2013-14 arising from the use of energy in Council buildings (including schools), as declared in the Council's annual report under the Government's Carbon Reduction Commitment Energy Efficiency

Scheme (CRCEES), amounted to 68,473 tonnes of carbon dioxide, representing a total cost of £821,676. This is a decrease of 4,927 tonnes (£59,124) compared to the previous year.

9. Table 2 shows reported carbon emissions under the CRCEES, and those associated with street lighting, for the previous 4 years, with figures in brackets showing weather corrected carbon emissions for energy use in buildings. This shows that when the effect of weather is taken into account (which the CRCEES does not do), a year on year decrease in emissions from County Council buildings has been achieved. The gradual reduction in the degree of this decrease does give cause for some concern as to whether this downward trend can be sustained, however the measures outlines in paragraph 12 onwards should sustain the current trajectory.

Table 2. County Council carbon emissions

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 (69,453)	23,981	**92,454**

10. The Government has made significant changes to Phase 2 of the CRCEES, which started in April 2014. The financial implications for the County Council from these changes are as follows:

- The cost per tonne increased from £12 to £16.40, and is then expected to increase in line with RPI each year. The price for 2015-16 has been set at £16.90
- Emissions from schools and academies are excluded
- Emissions from street lighting, signs and signals are included.

11. Phase 2 does make a provision for participants to forward purchase carbon allowances at a reduced price, and the Council has taken advantage of this opportunity to buy its estimated number of allowances for 2014-15 at £15.60 per tonne, which equates to a saving of about £38,000. Table 3 summarises predicted costs of CRCEES up until 2017-18, excluding any saving from forward purchasing and assuming emissions remain at 2013-14 levels.

Table 3. Predicted costs under CRCEES

Predicted CRCEES costs (Based on 2013-14 emissions, assuming these remain constant, and an RPI of 3%)						
	2013-14 emissions (tCO_2)	Year and cost per tonne				
		2013-14 £12	2014-15 £16.40	2015-16 £16.90	2016-17 £17.40	2017-18 £17.90
Schools	51,808	£621,696	excluded	excluded	excluded	excluded
Corporate buildings	13,839	£166,068	£226,960	£233,879	£240,799	£247,718
Street lighting	23,981	excluded	£393,288	£405,279	£417,269	£429,260
Pensions portfolio	2,826	£33,912	£46,346	£47,759	£49,172	£50,585
Total excluding schools	40,646	£199,980 (actual)	£666,594	£686,917	£707,240	£727,563

Measures to reduce energy costs and carbon emissions

12. The Council has a number of key programmes in place to tackle energy consumption and reduce its carbon emissions. These include:

(i) A revolving loan fund of £1.3million for investment in energy efficiency measures, of which £0.55million of funding has been provided by the Carbon Trust, via Salix Finance.

Up to the end of October 2014 this fund had invested £2.2million in the Council's schools and other buildings, saving 2,982 tonnes of carbon dioxide and £520,383 in energy costs per year. Measures funded include low energy lighting, energy management systems, improved heating controls and voltage optimisation, with the lifetime savings from investment in such measures amounting to over £6.7million and 37,000 tonnes of carbon dioxide.

(ii) A substantial street lighting energy saving project approved by Policy Committee in September 2013.

This was initially enhanced by a successful bid to Salix Finance for two interest-free energy efficiency loans, totalling £1.8million, for a county-wide dimming and an LED lighting replacement programme. Once these programmes are completed, expected to be around March 2016, with the loans being fully repaid by Oct 2019, predicted savings amount to approx. £520,000 per year in energy and a further £43,000 p.a. in CRCEES costs. A further £3.6m loan has recently been secured from Salix for street lighting energy schemes. This will be spread over 4 years and will accelerate the conversion of LED lanterns around the County. The loan will be paid back out of savings made on the energy budget as a result of the works.

(iii) Investment in photovoltaic (PV) panels on the roofs of various Council properties.

By the end of 2013-14 the SunVolt programme was generating an annual income of over £70,000, with additional annual savings from avoided electricity costs worth more than £22,000. To date, the investment of c. £620,000 in arrays on the first 11 buildings covered by the scheme has yielded £180,000 in income for the Council and saved over £55,000 in electricity costs. Another 8 recent installations are expected to generate annually an additional 200,000 kWh of electricity, raise £21,000 in income and save £18,000 in electricity costs. Further installations are under consideration as part of the £1.8million programme.

(iv) A £2million programme approved in September 2012 to replace remaining ageing coal, oil and LPG boilers in Council properties with modern biomass heating systems.

This programme utilises the Government's Renewable Heat Incentive (RHI) to repay the capital costs and generate an income for the Council to cover boiler maintenance costs and fuel purchase. The programme is well underway with the first few boilers installed and commissioned at a number of schools and the Council now receiving RHI payments based on heat meter readings. This programme follows on from previous activity, which has resulted in over 60 Council sites heated by modern biomass boilers, saving each year over 6,000 tonnes of carbon dioxide, and brings the Council's installed renewable heat capacity to over 10MW, which is approximately equivalent to 3 large scale on-shore wind turbines.

13. Further to these key programmes, the Council is considering as part of its annual budget approval process, an allocation of an additional £3million capital over 3 years for investment in energy saving measures to complement its existing revolving loan fund for quick payback energy efficiency measures, mentioned above. This additional capital has been approved by Corporate Asset Management Group and would provide funding for schemes that don't quite meet the strict criteria applied to the use of the revolving loan fund by Salix Finance.

14. The Council will also be limiting its energy costs and carbon emissions through its programme of property rationalisation and the creation of more energy efficient working environments. This has included the integration of energy efficiency measures into office refurbishments, energy efficient design for new Council buildings, and the use of low carbon technologies, such as ground source heat pumps.

15. All Council new build projects are designed to meet current building regulations and incorporate, where possible, daylight sensitive lighting controls, natural ventilation, sustainable drainage, rainwater harvesting, and other measures that save energy and reduce running costs. Use is increasingly being made of modular construction methods, which reduce time on site, help minimise waste and meet requirements for improved air tightness. Where refurbishments, such as the Schools Capital Refurbishment Programme, are being undertaken, every opportunity is taken to upgrade the buildings and services to meet the current regulations and reduce future energy use.

16. The Council is rolling out performance profiles for each of its property assets. These profiles bring together key information for each building, including running costs and energy performance ratings, and enable an assessment of each property's performance from both a building and service perspective. These profiles have already been actively used to provide information to support decisions regarding which assets to retain or sell, and allow target setting in respect of the performance of retained assets. Furthermore, they assist with more effective prioritisation of spending, including that on energy efficiency measures, thus optimising the use of available funds and supporting the drive towards reducing costs. In addition, high level indicators for the performance of the property portfolio have been developed and were approved by Finance and Property Committee in May 2014. These indicators include general energy performance information. The Council is also progressing with the 'One Property' central government initiative that seeks to promote the shared use of property. One of the direct effects of this is to reduce the carbon footprint of each sharing organisation.

Other Options Considered

17. Not applicable.

Reason/s for Recommendation/s

18. This report is for noting only.

Statutory and Policy Implications

19. This report has been compiled after consideration of implications in respect of finance, the public sector equality duty, 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.

Financial Implications

20. Overall energy costs to the Council are predicted to rise slightly in 2015-16. The Council has a number of programmes in place to tackle energy consumption and reduce carbon emissions. These will help militate against expected future price increases and reduce the charges for carbon emissions under CRCEES.

RECOMMENDATIONS

1) Committee is recommended to note the contents of this report.

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Constitutional Comments (EP 09.01.2015)

21. This report is for noting only.

Financial Comments (TR 22.01.2015)

22. This report is for noting only.

Background Papers

23. None

Electoral Division(s) and Member(s) Affected

24. None

File ref.: /SL/SL/
Ward(s): Other
Member(s): n/a Outside Nottinghamshire
SP: 2796
Properties affected: 09998 - Various NCC Properties/non-property item