

NORTH LANARKSHIRE COUNCIL

REPORT

To: CORPORATE SERVICES COMMITTEE		Subject: ASSET MANAGEMENT PLANNING, CARBON MANAGEMENT AND ENERGY MEASURES
From: HEAD OF CORPORATE PROPERTY & PROCUREMENT		
Date: 30 July 2015	Ref: EH/LJ	

1. Introduction

The purpose of this report is to update Committee on progress in reporting the Council's Carbon Reduction Commitment return for 2014/15 and to recommend priority spend areas for the 2015/16 Energy Efficiency Capital Programme.

2. Background

Committee will recall from a previous report of the same title, submitted to Committee on 5 February 2015, that over the previous year the Energy Team had overseen a reduction of approximately 12.35% in the Carbon Reduction Commitment (CRC) liability for the Council and had also made significant savings by introducing water and energy reduction measures and improving bill management and monitoring. This report provides an update on the recent CRC submission for 2014/15 together with proposed priority investment areas to provide efficiencies and future savings. The current capital allocation for 2015/16 is £455,108

3. Carbon Reduction Commitment

The Carbon Reduction Commitment (CRC) is an energy efficiency scheme implemented by the UK Government. It is designed to improve energy efficiency and cut carbon dioxide (CO₂) emissions in private and public sector organisations. Table 1 below shows the total cost of the CRC to North Lanarkshire Council. In 2012/13 CRC costs were £880,620 representing 73,383 tonnes of carbon and for 2013/14 this fell to £771,864 representing 64,322 tonnes of carbon. For the year just finished 2014/15, the basis for CRC changed to include unmetered supplies including street lighting. This will result in a payment of £1,310,786 which is £89,213 below the estimated budget. The total tonnage of carbon for 2014/15 was in the order of 79,926 tonnes of which street lighting and unmetered supplies represent 9,694 tonnes. On a like for like basis the carbon figures for 2014/15 show an increase of 5,923 tonnes on the previous year, an increase of 9.2%. Whilst the savings strategies have helped reduce our energy usage this increase is largely attributable to a longer heating season in 2014/15 and more accurate consumption reporting.

Table 1

Year	Utility	kWh	Cost	Utility	kWh	Cost	Tonnes	Carbon Charge
12-13	Gas	179,031,051	£4,475,776.00	Elec	73,289,984	£7,328,998.00	73,383	£880,620
13-14	Gas	155,043,150	£3,876,078.00	Elec	65,625,253	£6,562,525.00	64,322	£771,864
14-15	Gas	156,473,553	£3,911,838.83	Elec	94,716,574	£9,471,657.40	79,926	£1,310,786

4. Energy Saving Initiatives

The following paragraphs detail proposals for priority spend through the 2015/16 capital programme for energy efficiency and takes account of projects previously advised to committee.

4.1 Efficiency Investment Works

The programme of survey and identification of low cost consumption improvements, which started in 2014/15 will continue in relation to water consumption and it is proposed be extended to include electrical equipment. This includes the deployment of motion sensor devices and timers, which can prevent equipment from running out of hours and can have a significant impact on consumption at low cost. The allocation of funding recommended within the current programme is £250,000.

4.2 Improved Reporting of Consumption

It is proposed that the Council should invest in additional Automatic Meter Readers (AMRs) in key properties which currently do not have this facility. The benefit which can be derived from the deployment of such equipment is that consumption readings can be obtained on a real time basis and linked to alarms which can give early indications of spikes in consumption in individual properties. This can allow early intervention and the reduction in wasted consumption, often out of hours. The AMR programme will be deployed across key properties and all utilities, as considered appropriate and feasible, given physical constraints of properties. The allocation of funding required overall for this programme is £100,000 to cover AMR installation across gas, water and electricity. Due to changes in the water utility contractor it is recommended that this programme is phased over a 2 year period. Accordingly the anticipated spend on AMR's over 2015/16 will be in the order of £50,000.

4.3 Voltage Optimisers

Voltage Optimisers are a technology which modifies the level of incoming voltage to properties to ensure the efficiency of electrical equipment is optimised.

It is proposed to install voltage optimisers as a pilot in two High School sites, St Margaret's and Caldervale in Airdrie, which have been assessed and show potential savings of £8,000 per annum. These sites will then be monitored to determine the actual level of savings achieved. This will determine potential future benefits of this technology. The capital allocation recommended is in the order of £37,800 which shows a five year payback.

4.4 Boiler Replacements / Upgrades

Where possible, the majority of the Council's oil fired boilers have been replaced which is resulting in savings. Through recent condition surveys, annual inspection/service and by the monitoring of consumption, it is clear that a number of gas fired boilers are nearing the end of their economic life and can be increasingly inefficient. It is proposed that a more detailed exercise is undertaken to identify a priority programme for replacement of boilers and improvement of controls. It is proposed that a budget allocation of £75,000 is allocated to this programme in 2015/16.

4.5 Building Energy Management Systems

The programme of installing Building Energy Management Systems (BEMS) has proven successful in delivering savings through the control of building heating systems and closer monitoring and management of temperatures and operating times. BEMS will be complimented by the deployment of Automatic Meter Readers and alarms to provide a comprehensive energy management system to assist in securing efficiencies. It is proposed that £30,000 be committed in 2015/16 to bring additional properties under the control of BEMS systems.

4.6 Pilot Projects

A number of buildings suffer from extensive heat loss through entrance/access doors. The usual means of combating this is to provide a heated air curtain which is an expensive energy consumer. New technology has come to the market which supersedes the previous approach, by means of de-stratifying the air at the entrance which in effect creates a "seal" keeping heat in. It is planned to trial this at the Buchanan Centre in Coatbridge which suffers badly from this issue. The budget costs for this are in the order of £10,000.

4.7 Table 2 below provides a summary of the priority proposals for 2015/16

Proposal	Budget Cost
Efficiency Investment Works	£250,000
AMR Installations	£50,000
Voltage Optimisers	£37,800
Boiler Replacement/Upgrades	£75,000
Building Energy Management (BEMS)	£30,000
Pilot Projects	£10,000
TOTAL	£452,800
Unallocated Budget	£2,308

5. Other Initiatives

5.1 It is proposed to develop a Corporate Energy Strategy, which can assist in delivering future savings under the heading of Asset Management. Work is currently underway, however, this needs to be further developed through the Corporate Management Team before being presented to Committee.

5.2 In the past there have been fabric issues leading to poor energy performance of properties, particularly in some offices, including the Civic Centre. A survey of the windows in the Civic Centre has been commissioned to determine the level of work required to make these fit for purpose. This will inform a potential future programme, with the anticipation that this may start in the current financial year funded through the Office Accommodation budget and/or the Central Energy Efficiency Fund (CEEF).

6. **Recommendation**

6.1 It is recommended that Committee:

- i) note the position on CRC payments detailed above.
- ii) approves the proposals for future investment in energy efficiency measures contained in the programme detailed above at section 4 of this report.



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