

## CARBON MANAGEMENT PERFORMANCE

**Report from: Director of Environment & Culture**

### Wards affected

County-wide

### Purpose

1. To update the committee on information requested at the September meeting of Environment Scrutiny. This includes:-
  - Progress on carbon management and in particular progress in reducing emissions to meet the Council's Nottingham Declaration target of a 20% reduction in carbon emissions by 2020 (1.25% per year)
  - Current position in relation to fleet management of Council owned vehicles
  - Responsibilities for reading meters in council buildings
  - Update on progress in relation to the Local Area Agreement target (NI186) to reduce per capita carbon emissions by 4.9% (13.1% including national measures) by 2010

An update on work undertaken in relation to adaptation to the changing climate (NI188), principally the Local Climate Impact Profile and the response of managers to the need to consider the impacts of adverse weather on their services, is programmed for the February meeting of this committee.

### Financial Implications

2. There is a strong link between ongoing costs and carbon emissions, which mainly relate to use of fuel, electricity and gas. The Council spends significant amounts of money on energy and fuel. In 2007/08 (before the price rises) just under £2.4 million was coded to electricity, gas, oil, solid fuel, LPG and vehicle fuel for direct expenditure in council buildings (including schools) and vehicles. The major contributors were electricity £1.569million, gas £571K, vehicle fuel £114K, heating oil £110K. This is just under 1% of annual budgeted gross expenditure. In 2007/08 the council received £590K profit share from its utility partner, WMS, in relation to total spend, calculated as a percentage of all council and schools' expenditure with WMS (stationery and energy). This income is used to support the Council's overall financial position.

There is strong upward pressure in prices which puts pressure on budgets across the Council during the coming and future years. This affects all council directorates and schools. On September 1<sup>st</sup> 2008 the Council's electricity prices rose by 25-35% and gas prices will be up to 50%<sup>1</sup> more costly than last year. Higher prices will thus be in force for more than half

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<sup>1</sup> This is a capped price. WMS will review gas prices on a termly basis and will pass savings on to customers if they are able to secure lower gas prices on the energy markets.

the current financial year, including the winter months, at a cost expected to be around £200K. An additional £325K has been factored into next year's provisional budgets to cover the increased costs to be incurred in 2009/10.

3. Reducing carbon emissions by the council's current target is estimated to cost £230,000 to £345,000 per year- a sum very similar to the figure we will be paying year on year for the increased cost of energy. The amount available for investments in energy saving is currently about £40K per year. Increasing spend on increasing fuel and energy efficiency would enable ongoing year on year savings.
4. The council also spends significant amounts indirectly on utilities and fuel via contractors working directly on our behalf: these sums have not yet been quantified but are likely to have a significant impact on future prices. An example is the current FOCSA contract, where costs rise £30K per year for every 1p increase in diesel prices.
5. The Carbon Reduction Commitment comes into force next year for the public sector. If street lighting go to half hourly metering when their current contract expires this will put us into this carbon trading scheme, which has financial implications. See para 8.3.1 and separate report to this meeting.

### **Risk Management**

6. The Council leads on the Herefordshire Partnership Local Area Agreement target to cut county carbon emissions by 4.9% over 3 years. This means that there is likely to be increasing public interest in the council's management of its own emissions and its performance against its 2005 Nottingham Declaration target of a 20% reduction by 2020. This internal target works out at an average of 1.25% per year for its own emissions: this is lower than the reduction set by leading local authorities and lower than the LAA target for Herefordshire (average 1.6% a year). As the Council prides itself on taking a lead it would be more appropriate for the internal reduction target to be greater than the county target. However not meeting the target set is also a risk to our reputation.

There is increasing international and national pressure to act swiftly to reduce carbon emissions because of the scientific consensus that deep cuts in carbon must be made urgently to avoid irreversible changes to our climate and environment. The Government is committed to achieving a 60% carbon emissions cut by 2050 and is actively considering stretching this target to 80%.

### **Considerations**

#### **7. Progress on carbon management and in particular planned actions to reduce emissions**

The action plan to reduce council carbon emissions for the current year is shown at Appendix 1. The first meeting of Carbon Board has been held. The Carbon Management Action group meets quarterly and will be meeting again in January 2009.

Overall, counting reductions from both buildings, transport and landfill, the Council expects to meet this year's target of a 500 tonne reduction as quantified reductions of 600 tonnes of CO<sub>2</sub> have been identified.

### 8.1 Emissions reduction from Council buildings & services due 2008/09

The Council's Carbon Emissions Inventory (Appendix 3) shows the council, including its major contractors, is emitting around 17,000 tonnes of carbon dioxide per year, made up of 3,000 tonnes from transport and 14,000 tonnes from street lighting and property including schools. The 2007/08 figures are still an underestimate as some figures, eg those relating to emissions Council owned vehicles, are still not included. Our 1.25% reduction target requires a reduction of 219 tonnes per year on this figure. Further reductions beyond the target are of course beneficial as they reduce costs year on year.

The council has a £200K revolving Salix fund<sup>2</sup> for energy improvements to Council property, all of which has now been invested or programmed in various schemes. The action plan shows that we anticipate saving 200 tonnes of carbon dioxide from these Salix funded works in a full year. However these were not installed until well into the current year, so only about 100 tonnes of this will be realised in 2008/09. A further 100 tonne reduction is expected from the virtualisation programme for ICT servers, reducing power consumption and cooling requirements. Expected quantified savings for the current year for property and transport are thus slightly below the 1.25% target.

Other actions that should reduce consumption within the Council are also underway, although the carbon dioxide reductions have not yet been calculated. These are summarised in the action plan. An extra £50K recently made available to the Carbon Board for works in the current year has not yet been allocated.

Additionally works undertaken through Salix funding in HALO centres, which are owned by the council, are expected to reduce carbon dioxide emissions from HALO's operations by 200 tonnes. Energy use is a major cost for HALO so this investment has been helpful. HALO carbon emissions are not currently included in our Carbon Inventory.

### 8.2 Landfill emission reductions due 2008/09

The three major closed landfill sites for which we are responsible are estimated to be emitting 22,000 tonnes of carbon dioxide per year, a figure that is gradually declining as the waste in the sites decomposes. A 1.25% reduction in this figure is 275 tonnes per year. Consultants have been asked to review this emission figure to allow us to calculate the effect of the improved flare at Stretton Sugwas in reducing overall emissions more accurately. Landfill gas is not included in the new national indicator for Councils on reducing council carbon emissions, NI185. However landfill gas remains the biggest single source of council greenhouse gas emissions and was included in the Council's 2005 Carbon Reduction plan.

Calculations based on the first few months of operation show that the new flare at Stretton Sugwas is expected to save over 4000 tonnes of carbon dioxide equivalent a year. This is because the new flare is burning methane, a greenhouse gas 21 times more powerful than carbon dioxide, more effectively than before. This reduction is well above the target for the landfill reduction (275 tonnes) and is extremely encouraging. Additionally the new flare provides much more accurate data. This will enable Environmental Health to find out if the flow is sufficient to allow energy generation from the gas in the coming year. Consideration will also need to be given as to whether further reductions in landfill emissions (beyond those from the natural decline) are feasible for future years.

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<sup>2</sup> This fund is made up of £100K contributed by Salix and a matching £100K provided by the Council.

### 8.3 Work relating to carbon emissions in 2009/10

Next year there will be a different format for the Council's Carbon Emissions Inventory, as we will be using the new National Indicator, NI185. This will produce a nationally comparable baseline next summer for emissions in 2008/09. At this point it would be advisable to review the Council's own reduction target.

The rigour required from this reporting will help us to pick up

- Whether specific savings expected are actually being achieved (1.25% of total)
- Moves in the size and make up of overall emissions (98.25% of the total)

Even if all quantified savings predicted are achieved as planned, it is important to remember that the target will not be met if other developments are pushing overall energy use up, eg extended opening hours, additional electrical appliances, increased miles driven and so on.

The council has budgeted an additional £325K for 2009/10 to cover the rise in gas and electricity prices for Council occupied buildings. The aggregate increase in school bills will be a similar amount, as schools make up 43% of our spend with WMS. Schools will have to meet these increases entirely from their own budgets: £325,000 is the equivalent of 28 teaching assistant posts.

#### 8.3.1. Carbon Reduction Commitment

Many local authorities will become part of the Carbon Reduction Commitment carbon trading scheme in 2009/10. Participants are required to buy credits at £12 a tonne for all energy use. This would cost the Council between £100-200K in the coming financial year, depending on which elements of the portfolio are included. The council would reclaim these funds after a period if it makes savings at or above the target set. If savings targets were not met then credits would have to be purchased on the carbon market. Participants are also required to make detailed returns on energy use of their portfolios – and consumption figures are inflated by 10% for any building that does not have 6 actual meter reads.

It is not yet clear whether the council will cross the 6GWH threshold that would mean its inclusion in the current CRC round - but the fact that other authorities will be taking part means there will be a step change in the standard of energy reporting and monitoring by Councils.

### 8.4 Managing carbon emissions in 2009/10 and beyond

A strategic programme of ongoing and co-ordinated action is needed to continue to drive down overall emissions and reduce exposure to energy price rises for ourselves and our schools over the next decade and beyond. This requires a strategic approach to early identification of the carbon costs of options being considered for council services and buildings, looking at implications both for the council and in the wider county.

Denominational transport provides an example of the need to take county carbon emissions into account when looking for council carbon reductions. A worked example concerning the provision of denominational transport from the South Wye area to St Mary's RC High School in Lugwardine shows that while withdrawing this bus service would save the council both money (£28,500 per annum) and a relatively small amount of carbon dioxide (7.4 tonnes), it would contribute considerably to the overall carbon dioxide emitted in the county (by 46.5 tonnes) because the miles driven by parents would rise. This emission could potentially be reduced by active work to support, for instance, car sharing.

Several proposals have been put forward to reduce carbon emissions next year and further into the future. These include the possibility of renewables at Model Farm Ross, looking at the feasibility of a CHP plant for a cluster of public buildings in Leominster, adding further buildings onto the TREND energy management system and an extension of the Pedicabs routes. These will require active management to ensure that their feasibility is checked and that the most effective projects are followed through.

However some increases in emissions are already expected in the coming year and others may become apparent as a result of changes in service delivery. The most obvious one is that refuse collection emissions are likely to rise when recycling is extended across the county – though collection vehicles are likely to be more fuel efficient than the current fleet. No figures which enable calculation of carbon emissions are currently available but tenderers will provide figures which will enable these carbon calculations to be undertaken later in the contract letting process.

### **8.5 Achieving carbon savings – the current situation**

In order to reduce long term energy costs, the imperative to develop solutions that minimise carbon use must be clearly identified early in project developments right a cross the council. It is important to develop a framework to ensure this happens. Otherwise we will continue to be locked into long term payments for buildings that are not as carbon efficient as they could be, at the same time as the UK is seeking a sustained fall in energy use for decades to come.

Some opportunities for increasing specifications to improve energy efficiency are currently lost because the relatively small capital sums required needed are not available and there is no process or requirement to compute whole life carbon costs currently in place. During the current year the opportunity to use a carbon neutral fuel for the new Minster College has not been taken and no heat recovery is currently fitted to the new crematorium. Installing carbon efficient infrastructure – which is much cheaper at installation stage - needs to have a higher priority if we are to achieve our targets.

The need to identify potential carbon savings early on does not just relate to buildings but to planning wider service delivery. A major consultation at present relates to changes in delivery of social care. Herefordshire PCT have commissioned the Health Services Management Centre at Birmingham University to work with them in the strategic review of provider services. Different models for care delivery put forward will undoubtedly have markedly different impacts on carbon use, and its ongoing costs, for many years to come – yet environmental considerations do not appear to be included in the review paper and the heading on sustainability in the shortlist criteria contains no references to energy costs or the environment.

Based on the national figures from the SALIX programme, the estimated cost of reducing CO<sub>2</sub> emissions by 220 tonnes each year is around £115,000. However the SALIX programme has been extremely difficult to operate, as it has been almost impossible to find projects that meet their multiple criteria for persistence, cost of saving carbon etc. For example it would not be possible to replace an old gas boiler with a wood fired unit under the scheme due to the constraints imposed. The easily justified projects are from Halo and can meet the criteria due to the longer daily operating times of the Halo sites.

Property Services estimate that in order to realise CO<sub>2</sub> savings to meet our targets we will need a capital spend of 2 to 3 times the Salix figure i.e. a spend of around £230,000 to £345,000 each year for the next 3 years. This is not currently available. The current Salix pot will provide around £40K per year for new projects that meet its criteria.

**8.5.1** The Council's Procurement Strategy, passed earlier this year, sets out a commitment that should enable such considerations to be put in place. See extracts below:-

'In procurement optimising value for money calls for the choice of the bid that offers the best combination of whole life costs and benefits to meet the Council's requirements. This is not necessarily the lowest initial price option and an assessment of the ongoing revenue, resource and disposal costs, as well as the capital investment and financing costs. The Council's requirements relating to social, environmental, sustainability and other strategic objectives should be defined at the earliest stages of the procurement cycle.'<sup>3</sup>

'There is a compelling business case for making procurement spend more "sustainable". There are financial benefits for the council. Savings can be realised through the design and construction of buildings with lower through-life operating costs, better management of demand (including re-use, recycling and standardisation) and the acquisition of products that are more efficient in their use of energy, water and material resources. The environmental imperative is clear, particularly the need to reduce CO2 emissions and the amount of waste going to landfill.'<sup>4</sup>

However there is currently no mechanism in place to achieve this wider look at whole life costing for carbon.

### **8.6 Achieving carbon savings – options for improvement**

In order to provide certainty that our carbon reductions targets can be met over a sustained period, we need to put these statements into effect. In particular it would be helpful to require calculation of lifetime costs, including carbon costs, in all major projects and briefs to consultants. We also need to ensure contractors are required to provide us with data for our carbon inventory. These measures would have a major effect on our ability to manage the overall size and trajectory of overall council emissions over the next 10-30 years. They would also improve our knowledge of changes in the pipeline – which are currently only picked up through end of year returns relating to fuel and energy use.

A proposal to set up an Invest to Save mechanism in partnership with West Mercia Supplies to enable investment in energy efficiency works was recently developed and tabled. However the WMS Board (5/11) did not wish to progress this proposal at present.

Other possible sources of finance for energy improvements/carbon reductions are:-

- Applying for more Salix funding: this requires match funding from the council and for beneficiaries to pay back loans for works undertaken over a period. The challenge of identifying schemes that meet Salix criteria would remain.
- Entering a long term arrangement with a commercial outside body that would finance improvements in return for a substantial share of the financial savings achieved. This would be a major change.
- Schools are eligible for some national funding streams and considerable effort has gone into publicising these by both Regeneration's Home Energy Conservation Act (HECA)

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<sup>3</sup> Council Procurement Strategy 2008, section 6.1.3.

<sup>4</sup> Council Procurement Strategy 2008, section 6.2.2-4.

team and the new Project Development Team, whose remit now includes schools. However school buildings are the responsibility of the council and so excluded from many grant schemes. Grant schemes also change frequently so it would not be sensible to rely entirely on the availability of grants to meet our energy improvement targets. Current in-house resource to support applications is also limited.

All these options pose some difficulties – but access to funding to improve energy efficiency is needed to reduce both carbon emissions and ongoing costs for the Council.

#### **8. Current position in relation to fleet management**

The Council currently has no centralised responsibility for vehicles it owns. Vehicles are administered by the services that own them and there is no corporate guidance on selection of vehicles or records of mileage. Many vehicles are serviced by Amey as part of the contract. Over 200 vehicles have currently been identified and over 500 cars owned by staff are thought to be used on council business. See Appendix 2 for more information.

The Energy Saving Trust (EST) has offered to undertake a fleet review for us of vehicles below 3.5 tonnes in the current year: this could potentially save money and help inform future purchases. Fleet Manager Posts often generate sufficient savings to cover the cost of their posts. This review can only be undertaken when further information on the vehicles and their mileage has been entered into a database: this date entry is programmed for completion by Christmas.

#### **9. Responsibilities for reading meters in council buildings**

Accurate readings of consumption in our properties are key to effective energy management. At a corporate level it is the role of Property Services to manage the global property estate. To complement this and provide immediate local property management the role of the Officer in Charge of Buildings has been introduced. A nominated officer, undertakes this role in each Council run building, assisted by a Deputy.

In essence the Officer in Charge role provides vital local input on a daily basis to operate the Council's valuable property assets so that they support Council operations effectively and meet legal requirements. Training is run from time to time for new Officers in Charge. There is an annual meeting for Officers in Charge and their deputies to keep them up to date with developments in requirements relating to buildings.

Each council building has a nominated Officer in Charge &/or custodian. One of their duties is:-  
'To prevent the waste of resources and monitor the use of energy and water and to contribute to the council's targets of improving energy efficiency.'<sup>5</sup>

As part of this the Officers in Charge have a duty to "Monitor the use of energy and water by recording the monthly reading of each individual meter. A copy should be sent to Property Services and / or entered directly onto the West Mercia Supplies website."<sup>6</sup>

West Mercia Supplies send out email reminders to submit meter readings to the majority of our buildings. Submitting readings via the WMS website saves double entering and enables bills to be completely accurate. Improvements to their website currently underway will make it easier to

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<sup>5</sup> Property Management File introduction

<sup>6</sup> Property Management File index

identify and target sites who are submitting readings. The WMS website also enables customers to access a graph showing their energy use in the last year. Improvements to the website will make it easier to compare use with the same period in the previous year.

The vast majority of our several hundred sites do read their meters and notify these to WMS. A recent report showed that 39 sites had no readings for the 6 months till July 2008 - but many of these were extremely small, eg feeder pillars.

During 2007/08 the Sustainability Unit ran MY Energy (Manage Your Energy) with Severn Wye Energy Agency to encourage people to make low cost and no-cost changes in their offices to reduce energy use. Forty staff volunteers in 16 council buildings signed up and participated actively in working with their colleagues to encourage behaviour such as switching off appliances not in use. The project has now formally ended, but it is hoped that the behavioural changes will persist. The final report of the project is due in late November.

#### **10. Update on progress in relation to the Local Area Agreement target (NI186) on county per capita carbon reduction**

A successful launch meeting for this ambitious target to reduce emission from homes, businesses and transport was held on September 24<sup>th</sup>. The target is to achieve a 4.9% reduction in carbon dioxide emissions from Herefordshire homes, transport and businesses, as measured by DEFRA. National measures are scheduled to bring the total reduction to 13.1% by April 2010 – a very short timescale. However the present post holder, Ben Boswell, has now left for a more responsible position with Telford and Wrekin council. The post is not being readvertised immediately because of budget constraints but the financial position will be re-evaluated in the New Year.

The Sustainability Unit have successfully accessed some funding from the Energy Saving Trust to increase public awareness and a series of events will take place between now and the end of March 2009 in the council and the wider community. These include a Members' briefing session on February 10<sup>th</sup>. Strong joint working arrangements are in place with colleagues in various council directorates and the launch meeting showed there is considerable support for work with partners outside the authority. The Regeneration Directorate are seeking external funding for a dedicated Renewables post to support local and new businesses to increase use of renewable energies. The HECA team and Transport teams are also playing an important role in publicising and supporting this target.

Discussions about the allocation of the Area Based Grant in 2009/10 in order to meet LAA targets are currently underway. There is no new money. However it has been indicated in principle that we can expect that some allocation will be made to NI186.

## **RECOMMENDATION**

**THAT: The report be noted, subject to any comments members may wish to make to the Cabinet Member, Environment.**

#### **Attachments**

- Appendix 1: **Council Carbon Management Action Plan 08/09**
- Appendix 2: **Council fleet: vehicles known at November 2008**



Leased cars	54
Vans	50
Pool cars	11
4x4s	26
Minibuses	48
Mopeds	28
Plant various	Not known
Grey fleet (cars owned by staff and used on council business)	Not currently known: but expected to be in excess of 500

- Appendix 3: **Council Carbon Emissions Inventory 2005/08**

### **Consultees**

- Colin Eldridge, Andrew Blackwell, Ben Boswell, Richard Carter, Clive Hall, Colin Birks, Heather Foster, Karen Morris, Dean Hogan, Peter Cross, Chris Smith, WMS Utilities Team

### **Background papers**

- Report to Environment Scrutiny: September 2008