AGENDA ITEM NO 7

TEESDALE DISTRICT COUNCIL

Report To: EXECUTIVE COMMITTEE
8th September 2008

From: Lead Member for Resources: Councillor GK Robinson

Ward Member: All

Subject: ENERGY MANAGEMENT ANNUAL REPORT 2007/08

1.0 SUMMARY

1.1 This report is submitted to provide Members with details on the Councils' use of energy for the period 2007/08.

2.0 RECOMMENDATION

2.1 It is recommended that

2.1.1 The Energy Management Annual Report for 2007/08 is agreed.

3.0 LINK TO CORPORATE OBJECTIVES/KEY PRIORITIES

3.1 Objective: To improve our environment and transport

3.2 Priority: To continue to support the preservation and enhancement of all aspects of the natural, historic and built environment

3.3 Outcome: To manage our natural resources and reduce carbon emissions to the environment

4.0 BACKGROUND

4.1 This is the 10th Energy Management Annual report and is for the period April 2007 to March 2008.

4.2 The report defines all areas of utility consumption, costs and CO2 emissions for all properties of the authority.

4.3 From this report BVPI 180 statistical data was formed, this BVPI has now been deleted from the national reporting structure, however in consultation with many authorities through the energy network, it is considered that continuation of the data in the same format is essential for past comparisons to be made and this report complies with that format.

5.0 STATUTORY CONSIDERATIONS

5.1 Financial Implications: Increased costs for energy and increased consumption will impact on the budget for the authority.

5.2 Risk:

Risk	Category	Implications
Lack of energy management coordination	Regulatory	Will not achieve energy savings targets of Council or central government
Increased consumption will have an environmental impact on the District	Regulatory	Criticism from external agencies and environmental impact
Increased consumption	Financial	Impact on budgets

5.3 Equality and Diversity: None

5.4 Human Resources: No capacity or professional knowledge in energy management.

5.5 Community Safety: None

5.6 Legal Issues: None

Background papers:

1. Energy Management Annual Reports for previous years.

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ANNEX A

ENERGY MANAGEMENT REPORT 2007/08

PART 1 – GENERAL

1. SUPPLY CONTRACTS

1.1 The electricity contracts for the Sports Centre and all other sites were renewed, after tender, with our existing supplier Scottish and Southern Energy for a one-year period. The contracts were for a renewable energy supply in line with our Environmental Policy. The gas contracts for the Sports Centre and other sites were awarded in 2006 and were for a 2 year period.

1.2 The energy market has seen further consolidation of suppliers and the recent events of the world has seen for the third consecutive year a marked increase in prices. The cost of oil now seems to be the main 'trigger' for increasing gas and electricity prices, with oil reaching $140 a barrel this year contract renewals have seen increases exceeding 20% and this reflects the market trend in the energy arena. With 2 year gas contracts in place the authority has been cushioned from the impact of these rises however on renewal in 2008 it is anticipated that there will be a significant increase to costs.

1.3 Water costs are also on the increase and this year has seen changes in the area of surface water drainage costs and the introduction of a new schedule that is to be phased in over a 3 year period. Indications are that water companies will also be looking for an above inflation increase for water provision costs in the next 2 years.

1.4 The following is a list of companies who supply energy to the authority with the contractual dates:-

Electricity	Major Sites Minor Sites Sports Centre	Scottish & Southern Energy Scottish and Southern Energy Scottish and Southern Energy	1 year until September 2008 1 year until October 2008 1 year until October 2008
Gas	Sports Centre Other Sites	SWALEC SWALEC	2 years until July 2008. 2 years until August 2008.
Water	All Sites	Northumbrian Water	No de-regulation at present

2.0 COST & CONSUMPTION ANALYSIS

2.1 Listed below are the total costs and total consumption analysis for the past four years.

2.2 The costs by utility for all sites is shown below, overall costs for all utilities increased by £4.8k or 4.07%:-

SUPPLY	£ - 2004/05	£ - 2005/06	£ - 2006/07	£ - 2007/08
Electricity	33.8k	44.5k	59.9k	60.6k
Gas	27.2k	35.6k	33.7k	33.7k
Water	19.0k	21.6k	24.2k	28.3k
TOTAL	**80.0k**	**101.7k**	**117.8k**	**122.6k**

2.3 The consumption by utility for all sites is as follows:-

SUPPLY	2004/05	2005/06	2006/07	2007/08	10 year Targets
Electricity	686,908kwh	725,195kwh	740,220kwh	733,833kwh	583,020kwh
Gas	1,722,003kwh	1,732,317kwh	1,552,017kwh	1,587,949kwh	1,579,433kwh
Water	9,469cm	9,707cm	9,954cm	10,013cm	10,099cm (Amended 2002/03 to 12.5%) 9,818cm

3.0 CONSUMPTION TARGETS

3.1 Members will recall that we set 10 year consumption targets in April 1999 of 10% reduction respectively, for each utility compared to 1998/99. As can be seen from the above table (2.3) we have not achieved our 10 year targets in electricity however 2007/08 did see the first reduction in consumption for 3 years.

3.2 Having reached our 10 year target in gas consumption in 2006/07 we have seen a small rise this year however the 2 year average is still below our 10 year target. This has in the main been achieved by the installation of the solar panels at the Sports Centre and with the installation of a biomass wood pellet boiler in 2008 we should see a further and more significant drop for the future.

3.3 The 10 year target for water was achieved in 2002/03 and a revised target of 12.5% was then set. This year has again seen a small rise for the fourth consecutive year and while we are below our original 10 year target we are now 2% above our revised target set in 2002/03.

3.4 CO2 emissions that measure the total consumption of electricity and gas increased by 0.5% and we did not achieve our 10 year targets, there was over the period an increase of CO2 of 1.0%.

4.0 ENERGY PRICES

4.1 The price of all forms of energy rose during the year and this is indicative of world markets. As the authority was in the middle of a 2 year fixed price gas contract increases were not an issue for the

authority in this year however large increases are expected on renewal in 2008. The authorities energy bill rose by £4.8k for the full financial year.

5.0 CLIMATE CHANGE LEVY

5.1 The Climate Change Levy (CCL) Tax commenced on 1 April 2001 and the authority paid £2,453 in tax for the year. This is paid only on gas supplies as we continue to purchase renewable electricity supplies that are exempt from CCL.

PART 2 – SITE ANALYSIS

6.0 ENERGY IMPROVEMENTS

6.1 The authority has tried during the last ten years to manage its energy consumption and budget much more effectively. It is considered that in some areas this has been achieved with some investment in plant and other energy saving measures that have been a success. The authority is however trying to fulfil a complex role without a dedicated Officer to lead on the issue of energy management.

6.2 The energy savings initiative investment budget has seen new boiler installations at Teesdale House and Woodleigh, low energy lighting project for corridors and toilets and the installation of a number of replacement windows in Teesdale House. At the Sports Centre we have installed light sensor detectors in the main halls, high efficiency motors and variable speed drives for the pumping gear and in 2004 we completed a solar panel installation on the roof, this with the aid of 50% funding from the Governments 'Clear Skies' initiative. Recently we have been successful in obtaining a 40% grant from the Low Energy Carbon Buildings Programme for the installation of a biomass boiler in the Sports Centre. This will become the main boiler using wood pellets and with the installation of a new high efficiency backup gas boiler we should start to see major reductions from the second half of 2008.

6.3 The following is an individual site summary of consumption's for 2007/08:

6.3.1 Teesdale House: Electricity consumption rose for the 6th consecutive year by 4.1%, gas by 23% with water remaining static.

6.3.2 Woodleigh: Electricity and water were reduced by 9% and 18% respectively however gas increased by 34%.

6.3.3 Sports Centre: The largest consumer of all utilities; during the year electricity and gas decreased by 1.7% and 3.7% respectively and water consumption also fell by 6.2%. The investment in new technologies and improved energy practices within the Sports Centre has made significant savings over the past 10 years. Since 1999 electricity has increased slightly by 4% however gas has been reduced by 14.7% and water by a massive 45% and overall the CO2 emissions have reduced

by 9%. It is anticipated that the new biomass boiler and the work on the air handling unit will make further and substantial reductions.

6.3.4 Depots (2): The consumption of electricity decreased by 3.7% however gas and water rose by 11.6% and 11.3% respectively.

6.3.5 WCs: Water increased by 25.2% and electricity by 15.5%, the consumption for the Market Place toilets have been omitted since its closure.

PART 3 – ASSET MANAGEMENT PLAN

7.0 PERFORMANCE INDICATORS

7.1 The authority has maintained its performance monitoring in line with the old Asset Management Plan and BVPI 180 (now deleted) as have many Council's throughout the country. It is considered that this analysis is necessary and an important and valid benchmarking tool for the authority in managing energy within its assets.

7.1.1 Repair and maintenance costs per square metre (Gross Internal Area (GIA))

7.1.2 Energy costs (gas, electricity, oil, solid fuel) per square metre (GIA)

7.1.3 Water costs per square metre (GIA)

7.1.4 CO2 emissions in tonnes of carbon dioxide per square metre.

7.2 The buildings included in the indicators are operational buildings (excluding Housing and Schools) occupied by the authority. Those buildings are Teesdale House, Woodleigh, Stainton Grove Depots, Sports Centre and Public Conveniences. The Council does not now have any buildings defined in the non-operational category.

7.3 Attached at Appendix A is the energy report that not only sets out the base indicators as previously required but also included are graphs from which comparisons can be made for the past ten years.

7.4 Attached at Appendix B is a graph that shows the total CO2 emissions for all of the authority buildings.

8.0 CONCLUSIONS

8.1 The Council has achieved its 10 year targets of a 10% reduction in water consumption and has only just failed on its gas target by 0.5%.

8.2 The achievement in paragraph 8.1 must be tempered by the continual increase of electricity consumption which has risen by 4% over the same period.

8.3 Costs in all utilities continue to rise and this trend is expected to continue further as world demand for energy breaks all predictions. All staff must be made more aware of energy management and conservation throughout the authority if we are to become more efficient and economical in the uses of energy.

8.4 Our output of carbon emissions has increased over the 10 year period and the gains we have made in gas are being eroded by increases in electricity.

8.5 The lack of a dedicated officer to coordinate, promote and achieve an energy strategy within the authority is, as anticipated and reported over the past three years, now seriously affecting results.

Appendices:

A: AMP Energy and Sustainability document.
B: Graph of total CO2 emissions.

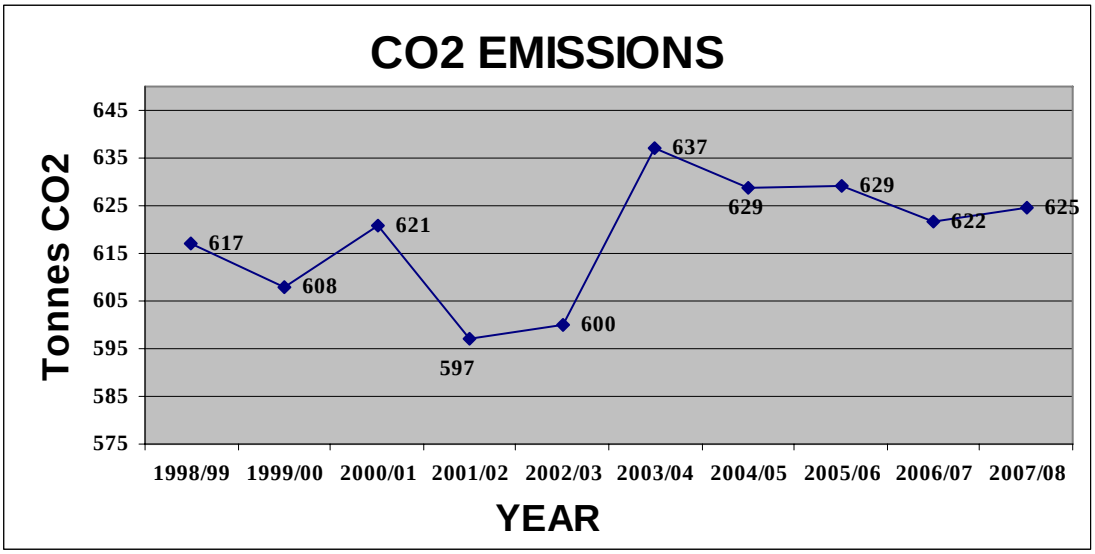
Appendix A

BEST VALUE PERFORMANCE INDICATOR 4A, 4B, 4C & 4D

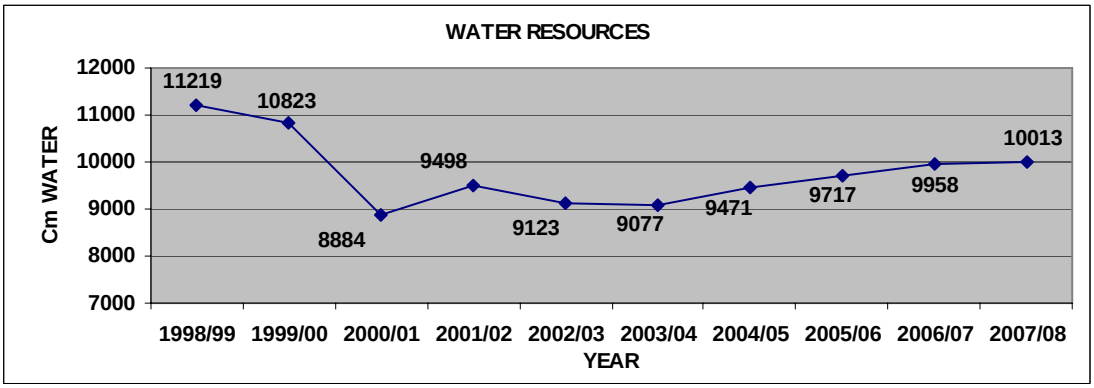
Energy and Sustainability

Teesdale District Council has an environmental policy, part of which contains an energy management statement that is "to continuously monitor the Council's use of energy, transport, water and other natural resources with the aim of reducing consumption and minimising the impact on the environment".

The Council has now been monitoring its energy consumption since 1997 and has set targets for the authority and each individual building, its main aim to reduce consumption on all utilities and CO2 emissions by 5% by 2004 and 10% by 2010.The results of the monitoring are reported annually to Members. The graph below illustrates total emissions for the last 10 years and it reflects an increase of 0.6% over this period.



Water resources are also monitored, with our Sports and Leisure Centre being the major user. Since monitoring commenced consumption has been reduced by over 10% however, the trend line is now rising. The graph below illustrates the upward trend after earlier year reductions.



The authority has continued to implement energy saving measures that include high efficiency boiler replacement, a window replacement programme and energy efficient lighting. In conjunction with the government's 'Clear

Skies' initiative a solar panel heating and hot water project was completed in September 2004 at our Sports and Leisure Centre, which has shown substantial savings in consumption. The authority has obtained a 40% grant for the installation of a biomass boiler into the Sports Centre (expected installation Sep 2008) and has installed a new high efficiency gas boiler as a backup, both of these will replace 17 year old boilers which are now inefficient and uneconomical to maintain.

The following baseline performance indicators are submitted with regard to operational property and energy efficiency for the years 2005/06 to 2007/08.

2005/06 PERFORMANCE INDICATORS 4A, 4B, 4C & 4D

BUILDING CATEGORY	NO OF PROPERTIES	GIA	REPAIRS & MAINT per sqm	ENERGY COSTS per sqm	WATER COSTS per sqm	CO2 EMISSIONS tonnes
		sqm	4A £	4B £	4C £	4D kg/m2
OFFICES	3	1776.37	4.08	9.39	1.21	0.0781
SPORTS CENTRE	1	2548.70	4.99	21.48	4.57	0.1747
DEPOTS	2	2535.12	2.11	1.99	0.95	0.0162
WCS	8	218.30	14.78	4.28	14.71	0.0195
Portfolio per sqm	14	7078.49	4.033	10.935	2.742	0.2885

2006/07

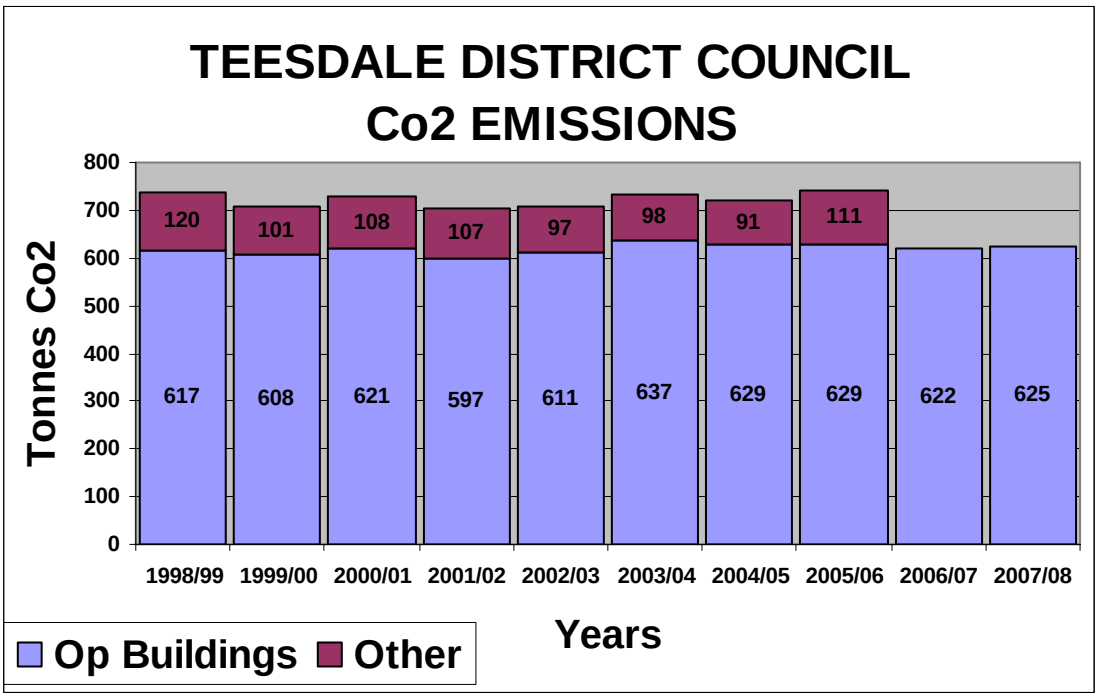
BUILDING CATEGORY	NO OF PROPERTIES	GIA	REPAIRS & MAINT per sqm	ENERGY COSTS per sqm	WATER COSTS per sqm	CO2 EMISSIONS tonnes
		sqm	4A £	4B £	4C £	4D kg/m2
OFFICES	3	1776.37	4.09	12.90	1.22	0.0800
SPORTS CENTRE	1	2548.70	3.89	24.50	4.70	0.1711
DEPOTS	2	2535.12	1.83	2.80	1.52	0.0155
WCS	7	201.30	25.33	5.60	15.09	0.0221
Portfolio per sqm	13	7061.49	3.810	13.255	2.977	0.2887

2007/08

BUILDING CATEGORY	NO OF PROPERTIES	GIA	REPAIRS & MAINT per sqm	ENERGY COSTS per sqm	WATER COSTS per sqm	CO2 EMISSIONS tonnes
		sqm	4A £	4B £	4C £	4D kg/m2
OFFICES	3	1499.1	8.07	16.70	1.54	0.1052
SPORTS CENTRE	1	2621.0	25.81	23.33	4.36	0.1618
DEPOTS	2	2512.8	9.11	3.02	2.00	0.0156
WCS	7	195.0	138.70	5.22	20.02	0.0188
Portfolio per sqm	13	6827.9	19.319	13.881	3.320	0.3014

Note: Revised GIA Sqm used in 2007/08 as per property surveys.

Appendix B


TEESDALE DISTRICT COUNCIL
Co2 EMISSIONS
Tonnes Co2
800
700
600
500
400
300
200
100
0
120
101
108
107
97
98
91
111
617
608
621
597
611
637
629
629
622
625
1998/99
1999/00
2000/01
2001/02
2002/03
2003/04
2004/05
2005/06
2006/07
2007/08
Years
Op Buildings
Other