

ANGUS COUNCIL

POLICY AND RESOURCES COMMITTEE

23 October 2001

REPORT BY THE DIRECTOR OF PROPERTY SERVICES

No 1202/01

ENERGY MANAGEMENT UPDATED STRATEGY AND FUTURE FUNDING ARRANGEMENTS**Abstract**

This report seeks approval of an updated Energy Management Policy and Strategy and the establishment of appropriate future funding arrangements to enable the Council to achieve its legislative obligations.

RECOMMENDATION

The Policy and Resources Committee is recommended to:

1. note the contents of this report;
2. approve and adopt the updated Energy Management Policy and Energy Management Strategy as set out in Appendix 1;
3. note that future funding arrangements based upon the recommendations contained within this report will be considered by the Budget Strategy Group as part of the budget preparation process for Financial Year 2002/03 and beyond.
4. note that a further report on the Budget Strategy Group's recommendations regarding future funding arrangements for Energy Management will be brought back to this Committee for consideration as part of the 2002/03 budget setting process.

1. INTRODUCTION

Report 917/97, approved at Policy and Resources Committee on 09 September 1997 detailed the Council's initial corporate energy management strategy. It confirmed the need for the corporate management of energy consumed by the Council's non-housing properties and established an 8% energy consumption reduction target to be achieved by the end of 2002/03 compared with base year 1997/98.

The report identified a need to redeploy savings achieved in the corporate energy budget for reinvestment and to support the additional costs associated with: -

- the establishment and operations of an augmented energy team
- education and awareness activities

- training
- “spend to save” initiatives.

The report identified that there was a need to establish formal arrangements for recovering the savings generated as a consequence of various initiatives: -

- corporate tariff negotiation
- corporate “spend to save” initiatives
- departmental good housekeeping

The budget pressures faced by the Council over recent years have however meant that it has not been possible to put in place formal arrangements on the use of energy savings.

The 1997 report focused predominately on the financial benefits which could be achieved through effective energy management with environmental benefits considered a secondary matter.

Since 1997 however environmental issues have had a raised profile and major initiatives have been introduced nationally and internationally to begin to address the implications of global warming. The Government has imposed new duties and objectives on local authorities to combat this problem and it is considered that the Council’s energy management policy and strategy need to be revised to reflect this significant change in priorities.

2. BACKGROUND

At the earth summit in Rio de Janeiro in 1992, the developed countries (including the UK as part of the European community block) agreed to a voluntary target of taking measures aimed at reducing their current emissions of the six main green house gasses including carbon dioxide to that of the 1990 levels of production by the year 2000.

Since 1992 the world, Scotland and Angus Council have become more aware of the significant environmental implications of energy consumption and its effects on the environment through climate change, a well recognised and recently demonstrated phenomenon.

The Scottish Parliament and the UK Government have recognised that original energy conservation strategies were inadequate and have introduced significant environmentally protective initiatives and targets for energy consumers through legislation and direction.

Home Energy Conservation Act

In 1995 the Government required local authorities, via the Home Energy Conservation Act (HECA) 1995, as energy conservation authorities to take action through the preparation and implementation of strategies to achieve substantial reductions in energy consumption and greenhouse gases across all residential properties. In Angus the council’s target is to reduce the carbon dioxide emissions in all housing within Angus by 28.2% by the year 2007.

Environmental Conservation

In December 1997 the Kyoto protocol was signed whereby the European Community member states agreed to a legally binding international commitment to an 8% reduction in the production of the six main green house gasses. It also endorsed an action plan for the 21st century, or Agenda 21 as it is commonly known.

Chapter 28 of Agenda 21 recognised the special role local authorities have to play as it is reckoned that two thirds of the actions in Agenda 21 require the active involvement of local authorities.

The Government, amongst other complementary initiatives, introduced a requirement for all local authorities to take action through the preparation and implementation of a Local Agenda 21 Strategy and Action Plan which incorporated the contributions to be made by effective energy management. The Council adopted a Local Agenda 21 strategy for Angus on 6th February 2001.

Reducing greenhouse gases emissions

In June 1998 during the UK's presidency of the EU the targets for the various countries were redistributed which resulted in the UK's target increasing from 8% to 12.5% below the 1990 levels of production by 2008-2010. Furthermore the UK government is working towards a domestic goal of a 20% reduction in carbon dioxide emissions by 2010.

Energy consumption in 2000/01, surprisingly for a colder winter, was lower than previous years and at the level of consumption estimated for 1990/91. If this status continued it will only be necessary to achieve reductions which compensate for anticipated increases in electricity consumption due to the significant levels of ICT development within Angus and the specified 12.5% reduction

However the scale of the reduction in greenhouse gas emissions requires a complementary reduction in energy consumption which will not be as easy to achieve as the previous financial savings targets.

The Council needs to take immediate action to ensure that its property estate is energy audited and early and continuous action is taken to reduce consumption by both property-related measures and good housekeeping initiatives. Only by making significant and early reductions can the 12.5% target reduction in carbon dioxide emissions be achieved.

Climate Change Levy

The Government, in 2001/02, introduced the Climate Change Levy [CCL - a tax on fuels] on non-domestic energy consumers as a mechanism for promoting the reductions in greenhouse gases and introduced a duty on energy suppliers to increase the availability of "green energy". This levy is subject to increase in future years as the Government increases pressure on performance.

In the former case, the council's fuel costs have increased by circa £155,000 p.a. and the council has received a compensatory reduction in employer's National Insurance contributions of a broadly similar amount. In September 2000 advice from COSLA, to use the NI savings to offset the additional costs due to CCL was achieved indirectly through the budgetary process. There was no surplus for investment in energy management and renewables as recommended by COSLA.

COSLA also recommended that councils examine the use of renewable energy sources and the government have introduced new levy measures to increase the proportion of energy consumption provided from renewable sources. In the short term these levies will be recharged to customers because new renewable resources take time to establish.

Scottish Executive Strategy

To emphasise the significant role that Local Authorities can play in contributing to protecting the environment, the Scottish Executive and COSLA held a Climate Change Seminar "Taking ownership" 26th April 2000 to encourage Elected Members and senior managers in local

authorities of the need for local authorities to take a lead role in planning and managing the activities of itself and the local community to contain and limit the impact of climate change on their communities and the nation.

This role was reinforced at the 23 May 2001 Climate Change Seminar, arranged by the Scottish Executive, Energy Saving Trust and COSLA, "Taking Ownership - One Year On" at the Scottish Executive offices at Victoria Quay .

Key speakers including Rhona Brankin MSP, Deputy Minister for Environment and Rural Development emphasised the need for effective action and the singular contributions that local authorities can make by effective energy management and conservation quoting HECA Strategies as a demonstrable case.

3. MEETING PREVIOUS TARGETS

The 8% energy consumption reduction target incorporated in the Council's current corporate energy management strategy has been achieved two years ahead of target and indeed exceeds the target by some 3%.

	1997/98	2000/01
Degree Days	Base	+18%

Consumption kWh	1997/98	2000/01	2000/01 adjusted for degree days
Electricity	20,698,748	21,587,694	19,839,091
Gas	36,425,676	38,683,830	31,720,741
Oil	12,049,646	12,318,175	10,100,904
<i>Total</i>	69,174,070	72,589,699	61,660,735
		<i>Change</i>	- 7,513,335
			-11%

Note: To permit true comparisons it is necessary to adjust the energy consumption for 2000/01 for changes in weather patterns i.e. degree days, compared to 1997/98.

The above reductions in consumption have resulted in financial savings within departmental budgets. The total savings made are as follows:-

	Budget	Actual
1997/98	£ 1,726,000	£ 1,689,727
2000/01	£ 1,703,000	£ 1,508,166
	<i>Change</i>	-£ 181,561
		-11%
Reduction target		£135,178
		-8%

4. ENERGY MANAGEMENT TEAM ACHIEVEMENTS

Creation and progress of the Energy Management Unit

The Energy Management Unit [EMU], whose creation was approved in June 1999, became operational in October 2000 following difficulties in obtaining a suitable Energy Technician at which point the Energy Clerical Assistant was also engaged. Specific funding was made available by a direct transfer of funds from the Corporate Energy Budget to the Property Services revenue budget in the 2000/01 Financial Year.

In accordance with the remit detailed in Report 626/99, the EMU has been progressing its main tasks and has made significant progress in a short period. However the national change in focus to environmental objectives and the targets set for the reduction in greenhouse gases emissions present the EMU with a major workload for the next few years. Many of the main tasks being undertaken by the EMU are just beginning to bear fruit in terms of reduced energy consumption and financial savings and need to be continued, improved and expanded.

Energy Audits

A four year programme of energy audits of 127 non-housing properties with notable energy consumption has been progressed with 37 audits having been completed, 10 at Leisure Centres and Swimming Pools; 27 at schools comprising 7 secondary and a representative sample of Primary schools. 11 reports have been issued, a further 15 have been drafted and will be published in the near future. 11 audits have been undertaken and reports are about to be drafted.

Development and use of Building Management Systems (BMS)

The Building Management Systems have been extended to incorporate Forfar Swimming Pool [StS], Reid Hall [StS], Bruce House [StS], Lochside Leisure Centre [StS], Glamis P.S., County Buildings [StS], Saltire Centre, Letham P.S., Andover P.S., Rosemount P.S. and in the near future Aberlemno P.S., Maisondieu P.S.

The EMU has been reviewing historical data and monitoring plant status and room temperatures for buildings where problems are known or suspected and this has enabled problems to be investigated in detail. Where appropriate local data logging of electrical consumptions and temperatures has been undertaken and the collective data analysed leading to remedial strategies to be developed and implemented.

Spend to Save

A small programme of corporate "Spend to Save" projects have been undertaken:-

- Oil to Gas conversions at Brechin High School, Forfar Academy, Arbroath Academy and planned for Carnoustie H.S.
- Electricity to gas conversion at Kirriemuir Town Hall & Library and planned for Dewar House.
- Electric pool covers at Brechin High School and Monifieth High School.
- Energy efficient lighting at Friockheim P.S., St. Drostan's RHE, Beechhill House RHE.
- Provision of new BMS as detailed earlier.

These projects have progressed the twin objectives of reducing both energy consumption and the production of greenhouse gases particularly where changes of fuel have occurred.

Support to the Energy Management strategy.

Design and Maintenance Standards

Design and Maintenance Standards and Best Practice Guidance are being prepared to harness the opportunities presented by significant property development and refurbishment to reduce energy consumption and consider the opportunities of changing to lower emission fuels.

Energy Management Steering Group

The recently established Energy Management Steering Group has met and is currently considering the mechanisms to be adopted for raising awareness, disseminating best practice and providing detailed energy consumption reports to all departments. This Group will also consider and make recommendations on how energy budget savings achieved by departmental and corporate initiatives should be used in-year and in future years; whether departments should benefit from their efforts and how corporate strategies and "Spend to Save" projects should be financed.

Education and Awareness

Education and awareness material, comprising posters and sticky labels, has been produced and is issued to properties following completion of energy audits. The Energy Technician is preparing to undertake a programme of school presentations on energy and environmental conservation.

Contract Management

Negotiations are ongoing towards introducing Electronic Data Interchange [EDI] which will enable electricity invoices to be received, processed and paid by the council electronically. This will promote savings due to a discounted fuel tariff and reductions in council staff annual entry resources but more importantly will allow more detailed analysis of energy consumption trends which will enable problems to be addressed and energy saving opportunities identified.

Management of fuel consumption

Meter readings, when and where available have been used to monitor and profile fuel consumption for non-housing properties.

Support to Local Agenda 21

The EMU has contributed to the preparation and implementation of the Council's Local Agenda 21 Strategy and Action Plan which incorporated the contributions to be made by effective energy management. The Maintenance & Energy Programmes Manager chairs the Energy Sub-group and is progressing a detailed action plan.

5. WAY FORWARD

Corporate Strategy and Policy

It is evident that the corporate energy management strategy needs to be updated to reflect the changes in focus, policy and strategy detailed in this report. Such an update is essential if corporate energy management is to deliver the contribution it can make to meeting the Council's environmental objectives.

A change in appreciation of the role of corporate energy management is needed. The focus of energy management strategies must now give far greater emphasis to the reduction of greenhouse gases emissions rather than financial savings alone.

“Spend to Save” and other initiatives need to be justified on the basis of their environmental as well as financial payback with the latter becoming less of a focus. Some initiatives e.g. conversion of boilers from oil to gas, will see immediate reductions in greenhouse emissions but take 3-4 years at current prices to break even and then generate savings.

It is therefore considered appropriate for the Council to adopt new a Energy Management Strategy and Energy Management Policy whose broad objectives are to conserve the environment and in the process reduce expenditure.

Corporate Targets

The adoption of the strategies detailed earlier in this report combined with a phased targeted approach will enable the Council to achieve the required reductions in greenhouse gases.

It is essential that the Council: -

- halt increases in greenhouse gases, and effectively energy consumption, by 1st April 2003
- achieve a 6% reduction in greenhouse gases, and effectively energy consumption, based on the 1990/91 level of production by 1st April 2006 and
- achieve a further 6.5% reduction (12.5% in total) in greenhouse gases, and effectively energy consumption, based on the 1990/91 level of production by 1st April 2010

This equates to a 12.48% reduction, or 9,060,467 kWh, based on the 2000/01 consumption figures.

Targeted Initiatives

Many council non-housing properties are low energy consumers and do not offer opportunities, individually, to achieve the level of reductions required. It is therefore necessary to introduce major reduction initiatives on the larger energy consumption properties so that their savings more than compensate for the smaller properties.

It therefore essential that every practicable opportunity is taken to undertake reduction initiatives and to harness activities and projects already planned.

The current corporate strategy recognises the benefits of a well focused and financed stand alone “Spend to Save “ programme complemented by “Good Housekeeping” by occupying departments. Budget pressures have however meant that previous Spend to Save funding has been irregular and sometimes opportunistic and in 2001/02 no Spend to Save resource is available. It is becoming evident that a more holistic approach is needed to meet the new and more demanding energy consumption targets being set by the UK government.

Where property maintenance and development works are being undertaken it is essential that consideration is given to introducing measures to reduce the overall level of energy consumption and consider the use of more environmentally friendly fuels.

Consideration must be given to the undertaking of energy reduction initiatives for whole properties when partial extensions or refurbishments are being undertaken and the associated costs accommodated within increased funding provisions, either by directly increasing available funding or indirectly via “Spend to Save” contributions from a well financed and protected energy conservation fund.

It will be necessary to set Property Services department, and where appropriate corporate, energy and environmental design and maintenance standards, which will in many cases exceed the minimum requirements of the Building Regulations, CIBSE guidance etc.

This will make a significant contribution to this initiative but it is recognised that this may result in increased project costs for departments, which departments may resist in the current financial climate. Some form of additional funding either directly or indirectly from specific top-up funding provisions would be necessary to support such an initiative.

It is therefore considered essential that sufficient robust and long term funding arrangements are established which will ensure that Angus Council is capable of discharging its updated obligations.

6. FINANCIAL IMPLICATIONS & FUNDING ARRANGEMENTS

Current arrangements

The Corporate Energy budget is established each financial year following consideration of previous expenditures on a property by property basis, changes in the non-housing estate and its utilisation, changes in general weather conditions and changes in general energy tariffs. Specific budgets are then prepared for each department and incorporated within their departmental revenue budget.

Savings achieved in-year are often used by department's to help off-set overspends in other areas of their budget and although this is in accordance with the Councils cash limited budget and budget virement arrangements it means that there is no mechanism in place to relocate in-year savings on energy budgets to support the corporate strategy nor roll over such savings for use in the following year. In this context it should however be noted that overspends on energy budgets require to be contained within that departments overall cash limited budget.

With the exception of a permanent transfer of £45,000 to the Property Services department revenue budget to fund the creation of the Energy Management Unit, no regular funding is made available for investment via "Spend to Save" or other initiatives. Property Services department Capital contributions and Property Renewal and Repair Funding has been provided over a number of years, on an ad-hoc basis, but no such provisions have been made available for financial year 2001/02.

Future Arrangements

To achieve the very difficult targets set by the Government it is essential that significant dedicated annual funding provisions are established, if possible from Financial Year 2002/03 onwards, and maintained in subsequent years, to support the necessary energy and environmental conservation "Spend to Save" projects and other initiatives detailed in this report. Clearly this will be a difficult task in the current financial climate. It will also be necessary to establish achievable decreasing annual energy consumption targets and associated budgets for departments.

Budget pressures in previous years have meant that dedicated funding for energy spend to save initiatives has not been regularly available and the Council will continue to face difficult budget decisions in future. However if the Council is to meet the targets which have been set it will be necessary to provide such funding from within the resources which are available.

It is therefore considered reasonable for the self-financing arrangements recommended in the previous corporate strategy to be fully adopted i.e., managing and utilising savings achieved in the corporate energy budget.

A mechanism is needed to allow such savings to be protected and redeployed in-year and rolled-over into future years. The corporate energy budget could then allocate sufficient annual investment sums to be utilised by the Property Services department through the Energy Management Unit.

Mechanisms will need to be established which maintain the incentives in the DSM scheme, extend incentives to other departments but also generate savings for redeployment. The Energy Management Steering Group is currently considering this matter.

It would be highly desirable for these arrangements to be established and implemented in 2002/03 and continued in subsequent years until the Council is able to anticipate successfully meeting its targets.

Given that the future funding arrangements for energy management will need to form an integral part of the Councils budget strategy into future years it is considered appropriate that the issues raised in this report be considered by the Budget Strategy Group as part of the budget preparation process for Financial Year 2002/03 and beyond.

The budgetary impact of changes in CCL, tariffs and other related matters will also be given due consideration by the Budget Strategy Group in the development of the Council's budgets.

7. HUMAN RIGHTS ACT IMPLICATIONS

There are no Human Rights Act implications specific to this report.

8. CONSULTATION

The Chief Executive, the Director of Law & Administration, the Director of Finance and the Director of Planning & Transport have been consulted in the preparation of this report.

9. CONCLUSION

It is appropriate for Angus Council to adopt an updated Energy Management Policy and Strategy which: -

- reflects the changes in environmental and energy conservation policy and strategy which have occurred since 1997,
- the new duties imposed on Angus Council for the promotion of environmental conservation through energy management and the reduction of greenhouse gases emissions.

The Policy and Resources Committee is recommended to note the contents of this report; approve and adopt the updated Energy Management Policy and Energy Management Strategy and note that future funding arrangements based upon the recommendations contained within this report will be considered by the Budget Strategy Group as part of the budget preparation process for Financial Year 2002/03 and beyond.

REFERENCES

<u>Committee</u>	<u>Date</u>	<u>Report No</u>	<u>Subject</u>
Policy and Resources	09 September 1997	917/97	Energy Management - A Corporate Commitment
Personnel and Property Services Committee	15 June 1999	626/99	Corporate Energy Management Strategy - Resources
Personnel and Property Services	28 August 2001	966/01	Energy Budget End of Year Report 2000/01

APPENDICES

Appendix 1 Energy Management Policy Statement

BACKGROUND PAPERS

No background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (other than any containing confidential or exempt information), were relied on to any material extent in preparing the above report.

M G Lunny
Director of Property Services

Appendix 1 Energy Management Policy Statement

Energy Management Policy

Angus Council is committed to the effective management of energy, as a corporate resource, with the express intention of contributing to the conservation of the natural environment through the reduction of overall energy consumption of its non-housing estate. It aims to meet its legislative obligations by achieving a 12.5% reduction in green house gases emissions by 2010, based on the 1990/91 levels of production.

Energy Management Strategy

Angus Council will, in support of its policy,:-

- create and sustain through the medium of the Property Services Department a high profile and priority for energy management in the Council,
- establish sufficient robust and long term funding arrangements which will ensure that Angus Council is capable of discharging its legislative obligations,
- establish and continuously adjust realistic annual energy reduction targets for each department and building,
- carry out an ongoing programme of energy audits to establish the efficiency of each building and make recommendations as to the management, operation and physical improvements required,
- establish and maintain a comprehensive energy database prioritising the works required to improve the energy efficiency of all operational buildings,
- implement an annual programme of physical and management measures to improve the energy efficiency of all operational buildings including utilising and supporting planned property development and refurbishment projects,
- take steps by means of co-ordination, management, training, publicity, education and where appropriate incentives, to encourage, involve and motivate staff in becoming actively involved in energy conservation,
- negotiate the purchase of energy on competitive terms to ensure that the Council receives best value,
- receive and consider at least annually reports on progress made and the benefits realised to date.

Energy Consumption and Greenhouse Gases Emissions Reductions

Angus Council aims to achieve to a phased reduction in energy consumption and greenhouse gases emissions which will ensure it meets the established target reductions by 2010 by:-

1. halting increases in greenhouse gases, and effectively energy consumption, by 1st April 2003,
2. achieving a 6% reduction in greenhouse gases, and effectively energy consumption, based on the 1990/91 level of production by 1st April 2006 and
3. achieving a further 6.5% reduction (12.5% in total) in greenhouse gases, and effectively energy consumption, based on the 1990/91 level of production by 1st April 2010.

