



THE HIGHLAND COUNCIL
ENERGY MANAGEMENT PERFORMANCE PLAN
DECEMBER 2005

BY 2010 WE WILL:

Target 1: Reduce energy use by 15%

Target 2: Save £3.8M in energy costs

Target 3: Reduce CO₂ emissions by a minimum of 15%

Target 4: Increase the installed capacity of renewable energy equipment by a minimum of 4,000kW

We will support this by a range of measures to make our buildings more energy efficient including:

- **Funding for energy saving improvements in at least 100 of our least energy efficient properties, and**
- **An Innovation Fund to deliver “quick wins” that can be identified by building users.**

We will also support behavioural change through publicity, incentives and training to encourage staff and building users to save energy.

1. INTRODUCTION

1.1. This draft Energy Management Performance Plan was developed by the Council’s Energy Management Working Group between April and December 2005. The Plan presents a 5-year framework for energy management in Council properties.

1.2. Providing heat and power to properties accounts for a significant proportion, but not all, of the Council’s energy use. Energy is also needed to run Council-owned or operated vehicle fleets and for street lighting and business travel. Whereas this Plan is focussed on energy management properties, the Council is also working with the Carbon Trust to develop a Carbon Management Strategy and Implementation Plan by June 2006, which will identify opportunities to reduce energy consumption in street lighting and transport.

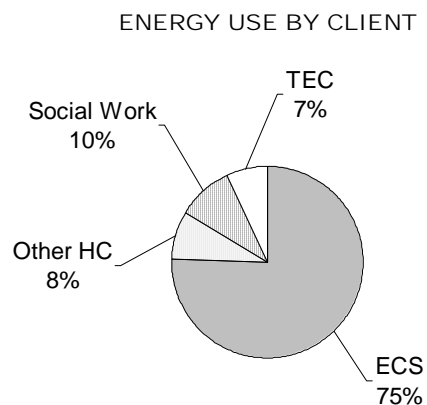
2. CONTEXT

2.1. The key drivers for the preparation for this Plan are:

- The urgent need to address rising pressure on Council budgets from the ongoing escalation in energy costs;
- The need to mitigate Climate Change by reducing the Council’s energy consumption and our dependency on fossil fuels;
- The Council’s commitment to sustainable development and "greening" our in-house procedures.

- 2.2 From 2003-4 to 2004-5 the Council's energy use increased by 11% from 144.5 M kWh to 160.4 M kWh. This difference of 15.8M kWh is enough to power four secondary schools for two years. There is no pattern to this increase in energy use, but an explanation includes: the operation of ten new or extended properties; increased electrical use for IT and office equipment, normally associated with a 1-2% increase in consumption, and extended operating hours of buildings, for example schools.
- 2.3. Over the same period that energy *use* increased by 11%, the Council's energy *bill* increased by 20% from £4.3M to £5.2M, as a result of rising energy costs and use. Of this additional £880,000 in energy costs, up to £512,145 arose from increasing our energy use.
- 2.4. The Council's energy costs are expected to rise further because of the increase in fuel prices. Even if consumption stays at the same rate the 2005-06 energy bill is expected to increase by a further £1.835M to £6.935M, with a further increase of £1.858M in 2006-07.
- 2.5. There is an urgent need for action to limit the effect of fuel price increases. By doing nothing, the increased costs would have to be met from Service budgets. The consequential impact on front line service delivery is unacceptable to the Council. Indeed the key messages from the public are that the Council should sustain front-line service delivery; ensure value for money; be efficient; and be in tune in with community views¹.

2.6. The Education, Culture and Sport Service (ECS) accounts for 75% of the total energy expenditure in Council properties, followed by Social Work (SW) at 10% and Transport, Environmental and Community Services (TECS), at 7%.

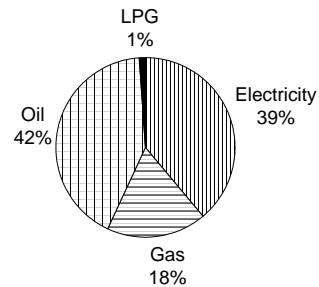


- 2.7. For the Council's housing stock, a programme of Warm and Dry improvements has been in place for eight years. Investment of over £55m to April 2005 has meant approximately 18,000 energy efficiency improvements with a further 3,000 planned by April 2007. Over this time some properties will have received more than one element of refurbishment that has improved their energy efficiency.
- 2.8. From 2003-4 to 2004-5 the Council's carbon emissions rose by 11%, from 44.84 thousand tonnes to 49.64 thousand tonnes. This increase of 4800 tonnes CO₂ making the same contribution to global warming as heating and lighting approximately 3000 UK homes for a year. Climate change means we can expect more frequent extreme weather events, like the storms in January 2005 which cost the Council at least an additional £2.6M.
- 2.9. The Highlands are overly dependent on electricity as a heating source because most of the area is not served by the gas network. The region is an importer of electricity, oil and gas. The breakdown of energy type consumed by the Council is shown below.

¹ Source: the Council's 2005 Performance Survey Results, taken from the most important features of the Council.

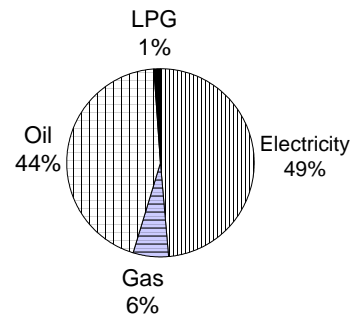
2.10. There is a strong case to take steps to reduce the Council’s electricity consumption. Although electricity accounts for around 39% of all energy used by the Council it is currently the most expensive fuel source, accounting for 49% of the energy bill. Electricity also has the highest rate of carbon emissions. Over 60% of Council properties rely on electricity for both heat and power. In a typical all-electric school or office, 50% of electricity costs are spent on heating, 40% on lighting and 10% on other power requirements. The unit energy cost (p/KWhr) for electric power is more expensive than the unit cost of most types of electric heat.

ENERGY USE BY FUEL TYPE



2.11. There is a growing need to shift dependency away from imported fuels towards a more diverse range of energy options, including greater use of renewable energy technologies, particularly solar, wind and biomass, at both large and small scales. The UK’s energy supplies are no longer as secure as they used to be and this is one of the reasons why energy costs are escalating. Our traditional reserves of coal, oil and gas are in decline and the country is becoming increasingly dependent on imported energy. Conservative estimates forecast that by 2010, 60% of electricity generation will be fuelled by natural gas, of which 49% will be imported.

ENERGY EXPENDITURE BY FUEL TYPE



2.12. The Highland Area is particularly rich in renewable energy resources and the Council aims to harness both its economic and energy potential to provide benefit for local communities as well as the global environment². To reduce dependency on fossil fuels the Scottish Executive has set an ambitious target to generate 40% of Scotland’s electricity from renewable energy resources by 2020. Shifting dependency from fossil fuels, however, involves more widespread use of renewables than electricity generation. More than half the energy used in Council buildings goes into space heating. In the Highland context, the use of wood fuel as a source of renewable heat is both an appropriate substitute for fossil fuel and a means of benefiting the local economy.

² Source: the consultative draft Highland Renewable Energy Strategy (2005)

3. OUTCOMES

3.1. With this context, this performance plan aims to:

- Reduce Council overheads to maximise resources to front-line services
- Mitigate climate change
- Reduce dependency on imported electricity and fuel;
- Support local economic development through growing the renewable energy supply chain.



4. OBJECTIVES

4.1. This performance plan will:

- **Reduce energy use** in Council buildings by making our buildings more energy efficient and our staff more energy saving.
- **Reduce energy bills** in properties which are improved and maximise savings in running costs across all properties through changes in staff behaviour.
- **Reduce carbon emissions** from Council buildings.
- **Increase the Council's share of energy from renewable sources.**

5. RESOURCES

5.1. The objectives can be achieved by using the following resources:

- Existing capital programmes and maintenance budgets by incorporating works aimed at reducing energy consumption and carbon emissions;
- A new Council Energy Efficiency Investment Fund of £2M over two years allocated on a Spend to Save basis to provide additional funding for capital improvements;
- A continuation of this Energy Efficiency Investment Fund for a further three years (to 2010) totalling £2.5M as part of the capital programme (*subject to Budget Working Group and Council consideration by February 2006*);
- Funding of £1.344M up 2010 from the Scottish Executive's Central Energy Efficiency Fund (SECEEF), comprised of £0.43M in 2005-06, £0.235m in 2006-7, plus the savings generated by the Fund reinvested in line with grant conditions.

In summary, the additional funding sources, both confirmed and proposed, for energy efficiency investment are as shown below.

Description	05/06	06/07	07/08 to 09/10	Totals
	£M	£M	£M	£M
Energy Efficiency Investment Fund Bids Approved	1.000	1.000	-	2.000
Scottish Executive Central Energy Efficiency Fund (SECEEF)*	0.437	0.235	0.672*	1.344
Total Confirmed Funding	1.437	1.235	0.672	3.344
<i>Energy Efficiency Investment Fund Bids subject to BWG and Council consideration</i>	-	-	2.500	2.500
<i>Total Target Funding</i>	<i>1.437</i>	<i>1.235</i>	<i>3.172</i>	<i>5.844</i>
*SECEEF funding 2007/08 – 2009/10 assumes savings from initial SE funding reinvested in fund in line with grant conditions.				

- 5.2. The Scottish Community and Householder Renewables Initiative (SCHRI) grant scheme administered by HIE for the north of Scotland may become a reliable source of additional funding, with £50,000 awarded for Council projects in 2005-6.
- 5.3. With assumed additional projected funding of £5.844M for five years the plan targets can be set for a five year period.

The additional funding over five years will be targeted at:

- **The Top 100 buildings** (defined as the biggest energy consuming and least energy efficient buildings), listed in Annex A. This list is not solely ranked by energy consumption but takes account of a range of energy performance indicators. The top 40 buildings will be improved by the end of 2006-07.
 - **Innovation Fund**, where good ideas proposed by building users are put forward by local managers / school boards etc (not excluding buildings in the Top-100, but supporting projects that demonstrate innovation in meeting the Plan's objectives).
- 5.4. The clear intention of the new funds is that they represent additionality. Mainstream capital programmes must include works aimed at improving energy efficiency and reducing carbon emissions.
- 5.5. The only scope for bids to be made to the Council's energy efficiency investment fund (CEEIF) for projects within the capital programme is where there are additional costs arising from sustainable energy principles, i.e. reducing dependency on fossil fuels and increased use of renewables. The criteria for accessing the Council's EEIF, based on Spend to Save principles, are shown on Annex B.
- 5.6. In all new build and refurbishment projects, where the scope of the works will impact on energy use, there will be a presumption in favour of renewables, supported by a full options appraisal at feasibility stage. This is detailed more fully below.
- 5.7. Other resources are staff time, knowledge and commitment. Dedicated specialist staff time will come from the Council's Energy and Sustainability Manager, the officer attached to the SECEEF and the Sustainable Development Officer. Key officers in building procurement and design will also be involved heavily in changing our energy systems and improving energy efficiency in our buildings. Other officers with an important role to play will include those monitoring energy management performance, those leading by example in changing behaviour in services and in buildings and indeed all staff with responsibility to reduce their energy use.

6. TARGETS AND ACTION

- 6.1. Targets are set for each of the four objectives as listed below. Annexes C and D show these targets for 2006-7 broken down for each Area, Service and, at this time, for each of the first 40 sites identified for improvement.
- 6.2. **TARGET 1: To reduce energy use by 15% by April 2010**
Using 2004-5 as the base-line, this means a reduction of 120M kWh over the period. Across the different fuel types, this translates into a reduction of 45.6M kWh in electricity use, 5m litres in oil consumption and 21.6M kWh in Gas consumption. There would also be an annual recurring reduction in total energy use after 2010 of 28M kWh.

This will be achieved by:

- 10% reduction in energy use in 2006-07 through behavioural change among staff, with that reduction recurring in each of the following years;
- A reduction of at least 5% in energy use built up by the end of a five year period, from year-on-year savings resulting from energy efficiency improvements in around 20 buildings per annum;
- Performance management arrangements, which include breaking down the targets by Area, Service and the annual top 20 list, and monitoring the targets quarterly.

6.2.2 Behavioural change actions

The 10% reduction in energy use will be achieved by staff, supported by:

- Publicity;
- Incentives; and
- Training

The cumulative effect of behavioural change can be significant and one of the key measures will be to encourage staff and building users to switch lighting and equipment off when not in use. If over the course of a year, a medium-sized photocopier is switched on overnight and at weekends, the cost to the Council is £30. Leaving 500 copiers switched on costs £15,000. A monitor and small laser printer left on round the clock costs £5 per week. Leaving 500 monitor / printer sets on costs £2,500 per week, or over £100,000 per year.

Annex E sets out the actions to support behavioural change. This activity will be ongoing with a campaign launch in February 2006, refreshed twice a year to coincide with the National Energy Efficiency Week (October) and the Scottish Energy Advice Week (February).

6.2.2 Energy efficiency improvement actions

Energy efficiency improvement actions include alterations to the building fabric, such as draft proofing around window and door openings, insulation to walls and roofs, double glazing and the introduction of energy efficient lighting. They also include “fuel switching”, such as the introduction of a solar powered hot water system to reduce electricity demand, or switching from electric to gas heating.

Fabric improvements will be selected on the basis of “payback period” – ie the time taken to ‘break even’ on investment, at which point the savings accumulated start to exceed the cost of carrying out the work, and year-on-year savings accrue. Payback is an essential feature of any “Spend to Save” approach. Many energy saving measures have very short payback periods. Aberdeen City Council recently realised financial savings of £1.1M after investing £300,000 annually for four years in energy saving measures – a payback period, therefore, of just over four years. Recent estimates for draught proofing in a selection of Highland schools yielded payback periods as low as 2.3 years.

To improve energy efficiency we will:

- Invest the total capital resource available (assumed minimum of £5.344M over five years).

- Develop guidance for accessing the innovation fund and introduce mechanism for inviting bids by February 2006.
- Deliver 100% of the capital programmes funded through the resource available within the timescale, i.e. in 20 sites per annum, plus those assisted through the innovation fund for smaller sites.
- Develop systems for tracking energy efficiency works (including renewables projects) to monitor progress against timescales by February 2006, and to include these within the measurement framework.
- Measure the energy efficiency component in mainstream capital and maintenance programmes.
- Have systems in place to monitor performance against energy use targets quarterly at Corporate, Service, Area and site levels by January 2006.

6.3. Target 2: To save £3.8M in energy costs by April 2010, after which annual recurring savings would be £900,000.

These savings are calculated on the basis of 2004-5 prices and the reduction in energy use as noted above. It should be noted that the total energy bill may continue to rise if price rises continue and these are outwith the Council's control. The savings target is based on the cost avoided based on 2004-05 prices; however the actual saving made will be adjusted to reflect actual prices each quarter.

6.4. Action to reduce energy costs

In addition to the action to reduce energy use by behavioural change and energy efficiency improvements, we will:

- Ensure procurement offers VFM through benchmarking and process improvements when contracts are under review
- Train staff on energy budget management by October 2006
- Implement the procedure for monitoring energy bills and consumption by 01.04.06.
- Calculate the real cost of savings based on actual prices, beginning 01.07.06 (first quarter 2006-7).

6.5. Target 3: To reduce CO₂ by a minimum of 15% by April 2010, after which CO₂ would continue to reduce annually by 8680 Tonnes

These figures are based on the reduced energy use noted above, based on 2004-05 figures. However, by switching energy sources to increase our use of renewable energy we can expect to further reduce our carbon emissions by at least 2500 tonnes in five years (below).

6.6. Action to reduce CO₂ emissions

The reduction in CO₂ emissions will correspond to the reductions in energy use. Other action to reduce CO₂ emissions is noted under Target 4 below. In addition we will:

- Complete the carbon management strategy by June 2006. This strategy is the outcome of the Council's commitment to the Caron Trust's Local Authority Carbon Management Programme which will include a plan to reduce CO₂ from transport, street lighting and waste management.
- Have a presumption in favour of renewables for new build and refurbishment will enhance our performance on reducing CO₂ emissions (see below).

6.7. Target 4: To increase the installed capacity of renewable energy equipment by a minimum of 4,000kW by April 2010.

These figures are based on replacing 20 existing fossil-fuel boilers with wood fuel boilers over five years, thereby increasing the installed capacity of renewable energy in Council properties by approximately 880kW per year. We will not, however, restrict the Council's use of renewables to biomass because this target will be delivered by weighing up options from a diverse range of renewable energy technologies.

6.8. Action to increase renewables

We will:

- Agree the approach for options appraisal to introduce renewables into Council properties by December 2005;
- Undertake costed options appraisal for renewable energy use at feasibility stage for 100% of Council³ capital projects, where the scope of the proposed work will impact on energy demand, with the presumption in favour of renewables;
- Have systems in place to monitor compliance with the options appraisal process and to monitor and review the output of options appraisals;
- Provide training for all staff with a client role in capital programmes in all services on renewables options by June 2006;
- Review by June 2006 whether % renewable electricity purchased should be increased / decreased, based on Carbon Management Strategy and cost implications of Climate Change Levy;
- Review this renewables target in the context of the revised Scottish Climate Change Strategy, expected February 2006.

6.9. A summary of action across the four targets is provided in Annex F. This will be refreshed annually. This sets out what will be done, by when, identifying the service responsible along with the lead officer, to ensure the targets are met. A further action is to look at energy management beyond the buildings in the ownership of the Council and to consider how best to include those buildings subject to Council grant for improvements or new build (e.g. private sector housing grants, grants for village halls and community facilities and in enabling new affordable housing).

7. Links to other parts of the business

7.1. The Energy Management Performance Plan is one strand of work to "green" the Council focusing on energy use in Council buildings. Further strands of "greening" will include the energy used in transport and in making more sustainable use of Council resources such our procurement, waste management and supporting bio-diversity.

7.2. The Energy Management Performance Plan will also support: the Council's Renewable Energy Strategy; the Fuel Poverty Strategy; the Home Energy Conservation Act Strategy and the Efficiency Strategy. The Plan will also demonstrate that the Council can lead by example in implementing the Council's policy on Designing for Sustainability.

8. Measuring and managing performance

8.1. At officer level, performance against the plan targets will be measured and managed through the corporate performance management system. This means:

- New corporate plan targets (to be proposed at the Council meeting in March 2006) and monitored six monthly by the Senior Management Team;

³ Council housing capital programmes will be considered separately.

- Service Plan targets reported at quarterly performance review meetings with the Chief Executive;
- Area targets monitored quarterly by Area Service Management Teams, led by Area Managers;
- Building-specific targets for those buildings prioritised for improvement (e.g. the top 40 for 2006-7), with a responsible officer identified.

The Energy and Sustainability Manager will provide data on energy use, energy bills and CO2 emissions monthly to enable tracking of performance. Energy champions, service, Area and Senior Management Teams will be responsible for analysing performance and taking remedial action where required.

9. Scrutiny of performance

9.1. Feedback on performance to Members will be streamlined into one performance report covering all targets at an Area and Service level to allow scrutiny at the following committees:

- As part of an annual report of performance against corporate plan targets to full Council;
- As part of the routine reporting of Service Plans (especially at the Committees for Education Culture and Sport, Housing and Social Work and TEC services);
- Quarterly reporting to Resources Committee (comparison with same quarter in the previous year as well as against the target set);

In addition the PAS/Client preferred option for replacement energy systems is to be agreed through dialogue between the Client, PAS and the Chief Executive's representative and in the event that agreement cannot be reached, the matter would be referred to the Chief Executive for consultation with the Chairman of the Sustainable Development Select Committee and the Chairman of the Strategic Committee.

10. Impact assessment

10.1 A Health and Equality Impact Assessment was carried out on this draft plan and a summary of this assessment is contained in Annex G. Overall it was agreed that the Energy Management Performance Plan has the potential to have a very positive impact upon health and is unlikely to have any adverse effect on any particular group of service users or staff. The recommendations will be incorporated into the Plan by March 2006. These fall mostly within the training for managers. It was agreed that progressing to either a full Health or Equality Impact Assessment is not necessary.

LIST OF THE COUNCIL'S TOP 100 ENERGY CONSUMING BUILDINGS

NOTE: This list is not ranked by energy consumption alone. It takes into account the following set of indicators:

- cost / consumption of fuel and energy;
- cost per square metre;
- cost per unit of energy;
- an indicator of climate, exposure, hours of use and floor area, and
- availability of opportunities to reduce energy consumption.

1. Lochaber High School	35. Graham House Resource Centre	69. Thurso Swimming Pool
2. Wick High School	36. Margaret Carnegie Hostel	70. Invernevis House Resource Centre
3. Grantown Grammar School	37. Isobel Rhind Centre	71. Duthac House Resource Centre
4. Golspie High School	38. South Primary School	72. Portree Swimming Pool
5. Dornoch Academy	39. Watten Primary School	73. Bayview House
6. Wick Swimming Pool	40. South Lodge Primary School	74. Fortrose Academy
7. Kingussie High School	41. Wick Assembly Rooms	75. Urray House Resource Centre
8. Charleston Academy	42. Broadford Primary School	76. Black Isle Leisure Centre
9. Plockton High School	43. Mallaig Primary School	77. Millbank Primary School
10. Nairn Academy	44. Conon Family Resource Centre	78. Dornoch Council Offices
11. Nairn Swimming Pool	45. Kyle Primary School	79. Grant House Resource Centre
12. Golspie Swimming Pool	46. Deshar Primary School	80. Alness Academy
13. Brora Primary School	47. Keiss Primary School	81. Auchtertyre Primary School
14. Lybster Primary School	48. Sleat Primary School	82. Inverness Royal Academy
15. Dingwall Primary School	49. Invergarry Primary School	83. Acharacle Primary School
16. Caol Primary School	50. Kyleakin Primary School	84. Golspie Primary School
17. Pennyland Primary School	51. Struan Primary School	85. Kinlochleven Secondary School
18. Coulhill Primary School	52. Achaphubuil Primary School	86. Beauly Primary School
19. Park Primary School	53. Loch Duich Primary School	87. Thurso High School
20. Crown Primary School	54. Merkinch Nursery School	88. Cauldeen Primary School
21. Duncan Forbes Pr School	55. Kinbrace Primary School	89. Bridgend Primary School
22. Kinmylies Primary School	56. Strathconon Primary School	90. Tarradale Primary School
23. Abernethy Primary School	57. Highland Council Headquarters	91. Lochcarron Primary School
24. Kingussie Primary School	58. Dingwall County Buildings	92. Maryburgh Primary School
25. Strathburn House	59. Inverness Town House (High S	93. Pulteneytown Academy Primary
26. Dingwall Divisional Education	60. Wick Council Offices (Market	94. Kilchuimen Academy
27. Seaforth House R Centre	61. Lochaber House	95. Inverlochry Primary School
28. Avoch Primary School	62. Fulton House	96. North Primary School
29. Smithton Primary School	63. Inverness Crematorium	97. Conon Bridge Primary School
30. Muirtown Primary School	64. Diriebught Roads Depot	98. Lochyside RC Primary School
31. Obsdale Primary School	65. Lochaber Leisure Centre	99. Kiltearn Primary School
32. Cradlehall Primary School	66. St Duthus Special School	100. Banavie Primary School
33. Hillhead Primary School	67. Invergordon Leisure Centre	
34. Craighill Primary School	68. Tain Royal Academy	

CRITERIA FOR ACCESSING THE COUNCIL'S ENERGY EFFICIENCY INVESTMENT FUND

(As agreed by the Resources Committee on 30 November 2005)

- a. Projects must aim to achieve a demonstrable reduction in energy consumption and/or carbon emission for the Council. The expected reduction in energy consumption, carbon emission, and cost savings must be detailed on a bid proforma (to be developed).
- b. Reductions must be sustainable over the longer-term.
- c. A fixed payback period is not defined for the fund; however, payback will be used to appraise the merits of projects to ensure maximum benefit is achieved.
- d. Costs (and savings), timings and outcomes must be realistic and deliverable.
- e. Funding requests must represent projects (or part of projects) that would not be met from mainstream maintenance or capital programmes. The clear intention behind the fund is that it represents additionality to existing funding streams rather than a substitute. Any existing capital projects should include works aimed at reducing energy consumption and carbon emission, but in the first instance, such works should be funded through existing capital programmes, rather than through this fund e.g. a routine boiler replacement on a like for like basis would not be eligible for funding as the expectation would be that this would be met from mainstream programmes. However, the additional cost of say a wood fuel boiler (over and above the cost of a like for like replacement) would be eligible.
- f. The fund may be used to 'buy out' savings from projects previously met through Scottish Executive CEEF funding. In these circumstances the above criteria will apply to the project to be bought out.
- g. Standalone HRA projects are not eligible, though the funds could be used for joint HRA/General Fund projects on a pro-rata basis with HRA funds meeting their share of costs.

2006-07 ENERGY MANAGEMENT TARGETS BY AREA AND SERVICE

TARGET:	BASELINE ENERGY CONSUMPTION 04-05	TARGET ENERGY CONSUMPTION	DECREASE BELOW BASELINE	BASELINE ENERGY COST 04-05	TARGET ENERGY COST SAVING*	DECREASE BELOW BASELINE	BASELINE CO ₂ EMISSIONS 04-05	TARGET CO ₂ EMISSIONS	DECREASE BELOW BASELINE
AREA:	(kWh)	(kWh)	%	(£)	(£)	%	(Tonnes)	(Tonnes)	%
Badenoch & Strathspey	8,917,563	7,992,475	10.4	314,020	32,212	10.3	2,920	2,619	10.3
Caithness	21,825,564	19,609,675	10.2	676,851	68,010	10	6,673	5,998	10.1
Inverness	48,966,586	44,03,264	10.1	1,456,836	146,775	10.1	14,279	12,836	10.1
Lochaber	15,655,720	14,073,482	10.1	524,116	52,735	10.1	4,963	4,462	10.1
Nairn	6,798,989	6,102,424	10.2	187,840	18,371	9.8	1,843	1,655	10.2
Ross & Cromarty	35,454,255	31,825,499	10.2	1,178,075	119,149	10.1	11,371	10,212	10.2
Skye & Lochalsh	10,301,476	9,237,997	10.3	377,402	38,499	10.2	3,413	3,063	10.3
Sutherland	12,456,942	11,186,249	10.2	470,813	47,677	10.1	4,476	4,022	10.1
TOTALS:	160,377,096	144,031,065	10.2	5,185,952	523,428	10.1	49,938	44,868	10.2
SERVICE:	(kWh)	(kWh)	%	(£)	(£)	%	(Tonnes)	(Tonnes)	%
Education, Culture & Sport	121,323,016	105,458,210	10.2	3,794,271	385,034	10.1	37,178	33,396	10.2
Social Work	15,343,308	12,374,902	10.1	495,125	49,677	10	4,472	4,016	10
Transport, Environment and Community Services	10,947,653	95,62,539	10.2	453,835	45,497	9.8	4,058	3,651	10.2
Other	12,763,119	11,348,707	10.1	442,722	44,220	10	4,229	3,805	10
TOTALS:	160,377,096	138,744,358	10.2	5,185,952	523,428	10.1	49,938	44,868	10.2

*Notional cost saving based on 2004-05 energy prices

2006-07 ENERGY MANAGEMENT TARGETS FOR THE COUNCIL'S TOP-40 ENERGY CONSUMING SITES

			BASELINE ENERGY CONSUMPTION 04-05	TARGET ENERGY CONSUMPTION	DECREASE BELOW BASELINE	TARGET ENERGY COST SAVING*	**GAS TARGET	**OIL TARGET	**ELEC TARGET	CO ₂ EMISSIONS TARGET
SITE:			(kWhr)	(kWhr)	%	£	(kWhr)	Litres	(kWhr)	Tonnes
1. Lochaber High School	LO	ECS	5020594	4510201	10.2%	13348	0	388208	414606	1243
2. Wick High School	CA	ECS	3624919	3212430	11.4%	10551	17579	260123	450555	911
3. Grantown Grammar School	B&S	ECS	2020717	1810312	10.4%	6274	0	128475	454898	548
4. Golspie High School	SU	ECS	1921667	1721167	10.4%	5823	0	131780	330887	504
5. Dornoch Academy	SU	ECS	1180937	1054510	10.7%	5390	0	0	1054510	457
6. Wick Swimming Pool	CA	ECS	2592728	2325121	10.3%	5034	1962744	0	362378	529
7. Kingussie High School	B&S	ECS	1417777	1267665	10.6%	4697	0	86961	350227	389
8. Charleston Academy	IN	ECS	2131206	1909752	10.4%	4594	1538580	0	371173	452
9. Plockton High School Hostel	S&L	ECS	363853	327467	10.0%	2048	0	0	327468	141
10. Nairn Academy	NA	ECS	5651531	5044713	10.7%	9605	4791974	0	252740	1019
11. Nairn Swimming Pool	NA	ECS	1291642	1154145	10.6%	4180	0	77563	335853	357
12. Golspie Swimming Pool	SU	ECS	1340311	1197946	10.6%	3708	0	103610	104860	329
13. Brora Primary School	SU	ECS	663126	588480	11.3%	2760	0	0	588480	257
14. Lybster Primary School	CA	ECS	952205	848651	10.9%	2776	0	73280	75546	233
15. Dingwall Primary School	R&C	ECS	747519	664434	11.1%	2717	0	46053	178572	203
16. Caol Primary School	LO	ECS	851967	758437	11.0%	2684	0	62318	100981	214
17. Pennyland Primary School	CA	ECS	471376	415905	11.8%	1981	0	0	415905	182
18. Coulhill Primary School	R&C	ECS	638446	566268	11.3%	2259	0	42790	114835	167
19. Park Primary School	R&C	ECS	592040	524503	11.4%	1967	0	42463	76516	149
20. Crown Primary School	IN	ECS	925405	824531	10.9%	1871	727185	0	97347	180
21. Duncan Forbes Primary School	IN	ECS	534526	472740	11.6%	1819	0	36912	83318	137
22. Kinmylies Primary School	IN	ECS	532908	471283	11.6%	1719	0	38885	61049	133
23. Abernethy Primary School	B&S	ECS	523116	462471	11.6%	1711	0	38479	56518	130
24. Kingussie Primary School	B&S	ECS	481658	425158	11.7%	1654	0	31821	89450	126
25. Strathburn House	R&C	SW	452634	399037	11.8%	1670	0	27192	112162	123

*notional cost saving based on 2004-05 energy prices

2006-07 ENERGY MANAGEMENT TARGETS FOR THE COUNCIL'S TOP-40 ENERGY CONSUMING SITES

			BASELINE ENERGY CONSUMPTION 04-05	TARGET ENERGY CONSUMPTION	DECREASE BELOW BASELINE	TARGET ENERGY COST SAVING*	**GAS TARGET	**OIL TARGET	**ELEC TARGET	CO₂ EMISSIONS TARGET
SITE:			(kWhr)	(kWhr)	%	£	(kWhr)	Litres	(kWhr)	Tonnes
26. Dingwall Divisional Office	R&C	ECS	462680	408079	11.8%	1627	0	31877	71772	118
27. Seaforth House Resource Centre	SU	SW	679319	603054	11.4%	2187	0	50240	73021	169
28. Avoch Primary School	R&C	ECS	458736	404529	11.8%	1579	0	33049	55860	115
29. Smithton Primary School	IN	ECS	493648	435949	11.7%	1496	0	38685	27823	118
30. Muirtown Primary School	IN	ECS	607843	538725	11.4%	1433	449127	0	89599	124
31. Obsdale Primary School	R&C	ECS	444347	391579	11.9%	1479	0	32406	49699	110
32. Cradlehall Primary School	IN	ECS	386839	339821	12.2%	1443	0	25563	70132	100
33. Hillhead Primary School	CA	ECS	219319	189054	13.8%	1046	0	0	189054	85
34. Craighill Primary School	R&C	ECS	403559	354870	12.1%	1334	0	30501	33081	98
35. Graham House Resource Centre	S&L	SW	382122	335576	12.2%	1264	0	27555	44874	95
36. Margaret Carnegie Hostel	S&L	ECS	418211	368057	12.0%	1291	0	28737	64878	107
37. Isobel Rhind Centre	R&C	SW	334067	292327	13.0%	1189	0	23240	47144	84
38. South Primary School	CA	ECS	222863	192243	13.7%	1014	0	0	192244	86
39. Watten Primary School	CA	ECS	232813	201198	13.6%	998	0	0	201199	90
40. South Lodge Primary School	R&C	ECS	420843	370425	12.0%	1480	0	29826	55758	106
41. Highland Council Headquarters***	IN	Other	3561162	3196713	10.2%	10526	1812018	0	1384695	940

*Notional cost saving based on 2004-05 energy prices

**A breakdown of baseline figures for oil, gas and electricity will be provided to building managers at the outset of Plan delivery

***THC HQ is brought into this programme in Year 2 in order to support publicity surrounding behavioural change in high profile Council buildings.

ENERGY MANAGEMENT PERFORMANCE PLAN

SUMMARY OF ACTION TO SUPPORT BEHAVIOURAL CHANGE

PUBLICITY **Campaign Launch February 2006 (refreshed in October and February each year)**

Publicity material (posters, equipment stickers etc)

E-campaign for PC users

Public display of campaign progress

Network of Energy Champions across Services / Buildings

INCENTIVES **Energy labelling for buildings**

League tables reporting energy management performance

Energy Management Quality Award from 2006 (new category)

Policing to monitor energy use

Innovation Fund Scheme for small buildings

TRAINING **Management Briefings Nov 2005**

In-house training courses in Energy Management, obligatory for:

- All Managers, as part of Management Competencies
- Service management teams
- Area management teams
- Energy Champions

Budget management training

In-house training courses in renewable energy opportunities for all officers with a client role in capital programmes, in all Services.

ENERGY MANAGEMENT PERFORMANCE PLAN TO 2006-07

SUMMARY OF ACTION ACROSS TARGETS (TO BE REFRESHED ANNUALLY)

TARGET 1:	To reduce energy use by 15% by April 2010	
ACTION	BY WHOM	BY WHEN
Improve energy efficiency:	<i>Abbreviations explained below</i>	
Invest the total capital resource available (assumed minimum of £5.344m over five years)	PAS/HOD	April 2007
Develop guidance for accessing the innovation fund and introduce mechanism for inviting bids.	PAS/ESM CEXO/SDO	Feb 2006
Deliver 100% of the capital programmes funded through the resource available within the timescale.	PAS/HOD	April 2007
Develop systems for tracking energy efficiency works (including renewables projects) to monitor progress against timescales by February 2006.	PAS/HOD CEXO/SDO	Feb 2006
Measure the energy efficiency component in mainstream capital and maintenance programmes, with measures agreed.	PAS/HOD	March 2006
Have systems in place to monitor performance against energy use targets quarterly at Corporate, Service, Area and site levels by January 2006.	PAS/ESM	Jan 2006
Promote behavioural change:		
Launch high profile publicity campaign within THC properties (to include posters, equipment stickers, radiator monitors etc) to coincide with Scottish Energy Efficiency Week.	CEXO/SDO PAS/EEO	Feb 2006
Issue press release announcing the Council's energy efficiency campaign.	CEXO/PRM	Feb 2006
Launch E-campaign for Council PC users: on-line questionnaire / energy efficiency messages and tips at Start-up and Shut-down.	CEXO/SDO/HOEG	Feb 2006
Set up internal network of Energy Champions to communicate and encourage energy efficiency measures.	CEXO/SDO	Feb 2006
Deliver twice yearly briefings (spring / autumn) on energy management to Area Management Teams, beginning Dec 2005. Programmes to be developed.	PAS/ESM EEO	Feb 2006

Deliver obligatory energy management training for Managers and Energy Champions as part of Management Development Programme, beginning February 2006.	CS /EDM PAS / EEO	October 2006
Incorporate strong energy conservation message into Chief Executive's management briefings, beginning October 2005.	CE/ DF/HOPP	November 2005
Join "Energie Cities" campaign and introduce method of Energy Labelling for all Council properties to be placed on public display and refreshed annually, beginning April 2006.	PAS/ESM	April 2006
Prepare and publish quarterly league table of energy management performance, reporting progress in delivering energy targets at individual Council properties, beginning April 2006.	PAS/ESM	April 2006
Introduce new "Energy Management category" of annual Quality Award for greatest achievement in energy reduction.	CEXO/PRM	August 2006
TARGET 2:	To save £3.8m in energy costs by April 2010, after which annual recurring savings would be £900,000.	
ACTION	BY WHOM	BY WHEN
Reduce energy costs:		
Ensure procurement offers VFM through benchmarking and process improvements when energy supply contracts are under review.	PAS / ESM TECS/ SPM	(Gas) April 2007 (Elec) April 2006 (oil) TBC
Staff training on energy budget management, beginning February 2006, as part of the Management Development Programme.	CS /EDM PAS / ESM	October 2006
Implement procedure for monitoring energy bills and consumption.	PAS / ESM	April 2006
Calculate the real cost of savings based on actual prices, beginning July 2006 (first quarter 2006-07).	PAS / ESM	July 2006
TARGET 3:	To reduce CO₂ by a minimum of 15% by April 2010, after which CO₂ would continue to reduce annually by 8680 Tonnes	
ACTION	BY WHOM	BY WHEN
Reduce CO₂ emissions:		
Complete the Carbon Management Strategy and Implementation Plan.	PAS / ESM CEXO/ SDO TECS /SM	June 2006

TARGET 4:	To increase the installed capacity of renewable energy equipment by a minimum of 4,000kW by April 2010.	
ACTION	BY WHOM	BY WHEN
Increase renewables:		
Agree the approach for options appraisal to introduce renewables into Council properties by December 2005;	PAS/HOD CEXO/SDO	Dec 2005
Undertake costed options appraisal for renewable energy use at feasibility stage, with the presumption in favour of renewables, for 100% of Council capital projects where the scope of the proposed work will impact on energy demand, beginning December 2005.	PAS/HOD	Ongoing
Have systems in place to monitor compliance with the options appraisal process and to monitor and review the output of options appraisals;	PAS/HOD CEXO/SDO	Feb 2006
Provide training for all staff with a client role in capital programmes, in all Services, on opportunities to use renewable energy in Council buildings.	PAS / ESM DECS/ DSW	June 2006
Review by June 2006 whether % renewable electricity purchased should be increased / decreased, based on Carbon Management Strategy and cost implications of Climate Change Levy;	PAS / ESM CEXO/SDO	June 2006
Review this renewables target in the context of the revised Scottish Climate Change Strategy, expected February 2006.	PAS / HOD CEXO/SDO	March 2006

Abbreviations:

CEXO	Chief Executive's Office	DECS	Director of Education, Culture and Sport
CS	Corporate Services	DF	Director of Finance
ECS	Education Culture and Sport	DSW	Director of Social Work
PAS	Property and Architectural Services	EDM	Employee Development Manager
SW	Social Work	EEO	Energy Efficiency Officer
TECS	Transport, Environmental and Community Services	ESM	Energy and Sustainability Manager
		HOD	Head of Design
		HOEG	Head of E-Government
		HOPP	Head of Policy and Performance
		PRM	Public Relations Manager
		SDO	Sustainable Development Officer
		SM	Sustainability Manager
		SPM	Stores and Purchasing Manager

Equalities and Health Impact Assessment of the draft Energy Management Performance Plan

Background

In October 2005, the Council agreed that the potential effects on health and health inequalities would be considered for new and reviewed Council policies. Health impact assessment tools are to be used, linking with similar approaches being piloted for assessing the impact of Council policy and practice on equalities groups. The Resources Committee agreed the process to be used as part of the Race Equality Scheme in November 2005.

The Process

The draft energy management performance plan was assessed for impact on health by using an accepted Rapid Health Impact Assessment Checklist and on equalities by using the Council's draft Equality Impact Assessment Initial Screening Pro Forma.

Impact was assessed for the following groups:

- Highland Council staff
- People on low income
- Age, specifically children and young people and older people
- Women
- Men
- Racial groups
- Gender identity and sexual orientation
- Religion or belief
- People with disabilities
- Whole population

The intended and unintended health impacts were identified under the headings of: personal/family lifestyles and characteristics, social environment, equity, physical environment and access to and quality of services. Consideration was then given to what further information was required to inform recommendations and whether a more detailed assessment was required.

The Positive Impacts

The Plan presents the potential to:

1. increase exercise and physical activity as behavioural changes could lead to rationalisation of equipment, for example, shared printers leading to staff having to leave their desks and walk around more often;
2. to increase participation of all staff by involving them in the changes to be made, with scope for the Council to lead by example with community planning partners and with the wider community;
3. reduce pollution by reducing CO₂ emissions;
4. raise awareness among staff of environmental issues (energy use and carbon emissions) and the Council's budgetary pressures. This could be passed on to the home situation, together with children bringing home ideas from exercises carried out in schools on the topic. This could impact positively on household income, in some cases reducing fuel poverty and in

others creating more disposable income. The Plan is likely to lead to more effective signposting to the Highland Energy Efficiency Advice Centre.

5. develop skills in staff through improved corporate working, including the introduction of healthy competition and incentivisation.
6. influence job creation as it is anticipated that local contractors will create local jobs to meet the demands of energy efficiency building improvements.
7. improve the physical environment through energy efficiency improvements, although it was noted that draft sealing can remove vital sources of ventilation, potentially impairing air quality, so following the installation of draft proofing it is recommended that air quality is monitored.

The Negative impacts

Some potential negative impacts were identified in relation to:

1. risk taking behaviour among staff if they feel that heating is set too low and begin to use unauthorised forms of heating which may not meet health and safety standards;
2. physical risks related to accidental injuries sustained by contractors carrying out energy efficiency improvements to Council buildings, or by staff or service users in buildings where works are undertaken;
3. tensions in the workplace as a result of enforcement and some stresses in terms of achieving targets and financial pressures;
4. the needs of wheelchair users and those without full mobility where rooms may need to be a little warmer. This may be a particular issue for Care Homes;
5. the needs of people with visual impairment and their lighting requirements;
6. sensitivities that some people can feel the cold more than others, for example those with medical conditions or, as some people believe, women tend to feel cold more than men;
7. community safety if buildings which are used at night become only partially lit to save energy, e.g. people may become less confident to attend a leisure centre to participate in activities due to a fear of crime or injury if the car park or entrance is not adequately lit.

The following key actions to mitigate these potential negative impacts are:

1. Clear guidance and training for all managers to ensure that they fully understand what is a comfortable and healthy temperature for all staff to work in, acceptable levels of lighting for all staff to carry out their duties and that standard regulations for hot water boiler temperatures remain unchanged;
2. Cascade training and awareness raising to all staff to ensure that they understand the rationale of the Plan and fully embrace the principles;
3. For staff in care homes to have specialist training, with a more gradual approach used for changing any heating settings where residents may have been acclimatised to over heated accommodation and for programmes of physical activity such as “moovin about” should be continued or introduced to ensure that people who are not fully mobile have increased circulation.

4. Normal Health and Safety procedures are followed to protect contractors, staff and service users;
5. A sticker system introduced which secures commitment from staff to allow others to switch off their equipment if they are not at their desks;
6. Ensuring that switches are accessible for equipment, heating and lighting if staff are to switch off more regularly, supported by a review of equipment specification and the location of switches;
7. Ensuring buildings which are open when it is dark have appropriate external lighting so that other action to reduce the fear of crime is not compromised.

Next steps

The action to mitigate the potential negative impacts identified can be woven into the actions for the energy management plan as a whole by March 2006. Most relate to the programme of training and awareness raising.

Arrangements to monitor whether the policy has had an impact on health or equalities will be included in the action plan. This could include some survey work (before and after questionnaires in the buildings which have had improvements carried out for example, in customer satisfaction surveys or including an additional question in future staff surveys on staff perceptions of the working environment)

For the full report of the impact assessment process, plus the checklist and pro forma used, contact Cath King, Policy Manager at cath.king@highland.gov.uk, or telephone (01463) 702139.