

**THE HIGHLAND COUNCIL
Resources Committee**

14 June 2006

Agenda Item	
Report No	

**ENERGY MANAGEMENT: MONITORING THE OPERATION OF THE COUNCIL'S
ENERGY EFFICIENCY INVESTMENT FUNDS.**

Report by the Director of Property and Architectural Services

Summary

This Report identifies the progress to-date in the operation of the Central Energy Efficiency fund, CEEF, and the Council's own Energy Efficiency Investment fund, EEIF. It also seeks authorisation to a phase 2 of Projects.

1. Energy Management Performance Plan

1.10 On 11 January 2006, the Sustainable Development Select Committee approved the implementation of the **Energy Management Performance Plan. The Energy Efficiency Investment Fund** was set up to support the delivery of this plan, by providing additional funding for capital improvements, allocated on a "Spend to Save" basis.

1.11 The Plan has four overarching targets to be delivered by 2010, which are to:

1. Reduce energy use by 15%
2. Save £3.8M in energy costs
3. Reduce CO₂ emissions by a minimum of 15%
4. Increase the installed capacity of renewable energy equipment by a minimum of 4,000kW.

2. Central Energy Efficiency Fund, CEEF

2.10 The Scottish Executive has given a grant to the Council of **£671,992** for the purposes of reducing energy consumption, costs and carbon emissions in Highland Council Buildings. This programme is known as the **Central Energy Efficiency Fund, CEEF**. This is paid in two instalments, **£436,795** in 2004/05, (already received) and **£235,197** in 2005/06. The second instalment being paid upon receipt of satisfactory monitoring reports and evidence that 50% of the first instalment had been spent appropriately by the end of March 2006.

2.11 The fund sets strict criteria for accessing, spending and repaying these resources to the **CEEF**. It requires that the resultant savings are paid back initially to the fund over the qualifying pay-back periods, of the projects financed, which currently can not exceed 5 years. This is in order to maintain the fund at its initial level to support future funding. The Council could 'buy out' the saving by paying back investment into the fund from another source such as "Spend to Save" if it wished to do so in order to realise immediate savings on its Revenue Account.

- 2.12 Resources Committee on 24 August, 2005 agreed to delegate authority to the Director of Property and Architectural Services for the Operational Management of the **CEEF**. This allows Energy saving measures to be identified, on an ongoing basis, assessed and evaluated and, if they meet the **CEEF** Criteria to be implemented immediately to maximise the savings that accrue.
- 2.13 Following the identification of high energy consuming sites, a first phase of surveys by staff from Property and Architectural Services on the top 20 sites, identified opportunities for Energy saving works. These are listed in **Appendix 1**, together with what were the anticipated savings in (£'s) for every £1000 invested on these measures within the buildings listed. Duthac House has since been omitted due to decisions taken by the Council. Staff resources did not allow the extent of all these measures to be quantified in advance and the precise costs of installation being determined after tendered rates are obtained, and the works completed.
- 2.14 Contracts for draught stripping, roof and cavity insulation works have been progressed, and those for other works are currently at various stages of preparation or implementation. In order to get the works underway as speedily as possible these are being tendered using schedules of rates and approximate quantities. The tendering contractors being required to visit the sites to make themselves aware of Health and Safety and access requirements for the works and reflect these in the tendered rates. The successful contractors for the various projects quantify the works completed for checking by our area based staff as part of the invoicing procedure. The programme for the works in phase 1 and proposed for phase 2 properties is indicated in **Appendix 2**.
- 2.15 The spreadsheet included as **Appendix 3** indicates the values of contracts tendered, accepted, invoiced and paid by the 24 March 2006 year end deadline through the **CEEF**. It indicates the estimated value of the contracts as accepted, with the addition of the fee for delivering the Projects on a Contract by Contract basis. It further indicates the final account invoices based on actual works completed and verified on site, and the adjusted fee and Final Account Values.
- 2.16 This spreadsheet will constantly be updated as Projects are tendered, accepted, invoiced and the contractors are paid.
- 2.17 It should be noted that saving opportunities on sites additional to those surveyed are added into appropriate contracts on site after they are advised to the Energy and Sustainability Manager, or incorporated in future contracts. Additional costs for staffing, equipment etc will be paid through the CEEF Fund but are not included as Contracts in Appendix 3, and are included in the Summary of expenditure indicated in **Appendix 4**.
- 2.18 In order to realise energy reductions and consequent cost savings, and to meet the conditions for obtaining the second part of the **CEEF** grant, a minimum of **£218,400** had to be spent, and authorised by the Director of Finance to the Scottish Executive by 31 March 2006.
- 2.19 It will be noted, that despite difficulties in gaining access to occupied schools during the normal working day, and requests from Head Teachers that the drilling works associated with cavity insulation be put back till the Easter holidays in April, we have successfully achieved our minimum target. The Council has now received payment of the second instalment of **£235,197** from the Scottish Executive.
- 2.20 We had understood that other local authorities were not as confident of delivering their programmes and we will report on this further in future reports.

3. **Energy Efficiency Investment Fund, EEIF.**

- 3.10 **The Energy Management Working Group, EMWG** supported a bid to the Council's **Budget Working Group, BWG** for dedicated funding sources to support investment in Energy Efficiency.
- 3.11 On 29 September 2005, **BWG** agreed a report requesting the establishment of an '**Energy Efficiency Investment Fund, EEIF**', to be funded by a sum of £1m in 2005/06, and a further £1m in 2006/07, funded from balances to provide initial investment to complement Scottish Executive '**Central Energy Efficiency Fund CEEF**' monies.
- 3.12 The Council has agreed that Resources Committee should have authority for approving projects to be met from the £2m allocated, and the Resources Committee on 30 November 2005, agreed the follow criteria for the **EEIF** as recommended by the EMWG:
- i. 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).
 - ii. Reductions must be sustainable over the longer-term.
 - iii. 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.
 - iv. Costs (and savings), timings and outcomes must be realistic and deliverable.
 - v. 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.
 - vi. 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.
 - vii. 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.
- 3.13 Resources Committee also noted the second Phase of surveys, on the next highest energy consuming sites, nos 21 to 56, together with the addition of the Principal Administration buildings. The non-services related elements of these surveys have just been completed by PAS Surveyors and Inspectors. These sites are indicated in **Appendix 5**.
- 3.14 **Appendix 6** indicates those projects within the phase 1 sites that qualify for **CEEF** funding and are initially being progressed through this programme. It also indicates those projects that cannot be progressed through **CEEF**, but meet the agreed criteria for the **EEIF** and received Members Agreement at Resources Committee for these to be progressed now, to maximise the savings that will accrue. As with the phase 1 **CEEF** works these are being tendered on a schedule of rates with approximate quantities and the overall extent required, confirmed after the works are completed and verified on site.

- 3.15 The spreadsheet included as **Appendix 7** indicates those contracts tendered, accepted, invoiced and paid by the date of the report, through the **EEIF**.
- 3.16 It indicates the estimated value of the contracts as accepted, with the addition of the fee for delivering the Projects on a Contract by Contract basis. It will further indicate the final account invoices based on actual works completed and verified on site, and the adjusted fee and Final Account Values. This spreadsheet will constantly be updated as Projects are tendered, accepted, invoiced and the contractors are paid.
- 3.17 It should be noted that some of the works carried out under **CEEF** contracts numbers such as Insulation contracts PACEEF/ 0020 & 0021, have some measures that have payback periods that cannot be funded through **CEEF** and will be funded from **EEIF**, but benefit from being carried out in the same contract.
- 3.18 Costs for those works being paid through **EEIF** will be ascertained at final account stage and shown in the **EEIF** spreadsheet. Alternatively the whole contract value can be 'bought out' using **EEIF** monies to allow the savings to accrue to the Council, and thus indicated in full.
- 3.19 It is recommended to this Committee that the full **CEEF** programme with its shorter payback periods are "bought out" using funding from the **EEIF**.

4. Reporting of Investment and Annual Energy savings on individual sites.

- 4.10 The Energy unit will report monthly from the beginning of June 2006 on a site by site basis, the Energy saving projects funded from both the **CEEF** and **EEIF** Programmes. This will indicate, site, measure undertaken, cost, payback period and annual deduction to be recovered.

5. Phase 2 Projects to be funded from either CEEF, EEIF or a combination of both.

- 5.10 **Appendix 8** indicates those Energy Saving Projects identified from the phase 2 Surveys as noted in item 3.12. Unlike in the phase 1 surveys, Resources and time has allowed the saving opportunities to be quantified. This allows the Project, Site, Installation cost and anticipated annual saving to be reported for approval in advance.

Recommendation

Members are invited to:

1. Note the operation of the **Central Energy Efficiency Investment fund, CEEF**, and particularly the success in obtaining the second instalment of the fund as noted in item **2.18**.
2. Note the operation of the Councils **Energy Efficiency Investment fund, EEIF**.
3. Agree the recommendation in item **3.19** that the **EEIF** should "buy out" the investment made from the **CEEF**, so the savings can accrue to the Council.
4. Agree the **phase 2** programme of works as noted in item **5.10**.

Signature:

Designation: **Director of Property & Architectural Services**

Date: 23 May 2006

Author/Ref: Mr. Peter Winthorpe, Head of Design

		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20		
		Lochaber High School	Wick High School	Grantown Grammar	Golspie High School	Dornoch Academy	Wick Swimming Pool	Kingussie High School	Charleston Academy	Plockton High School	Nairn Academy	Nairn Swimming Pool	Golspie Swimming Pool	Brora Primary School	Lybster Primary School	Duthac House	Dingwall Primary School	Caol Primary School	Pennyland Primary School	Coulhill Primary School	Park Primary School		
Draught-proofing	install / replace draught seals to windows / doors	X	X		X	X		X		X				X		X	X		X	X	X		627
Insulation	install / top up insulation in roof space	X	X		X	X		X	X	X			X		X	X	X	X	X	X	X		501
	install / top up insulation in ceiling space								X				X		X	X				X			501
	install / top up insulation in external walls	X	X		X			X	X	X			X	X			X	X	X	X			104
Heating System - Controls & Insulation	install / repair replace thermostat	X	X	X	X			X					X				X	X		X	X		10%
	install / repair / replace TRV		X	X	X			X	X	X	X	X			X	X	X			X	X		10%
	install / repair / replace heating controls	X	X	X	X		X	X		X	X				X		X			X	X		10%
	install / repair / replace zone valve				X				X	X					X	X				X	X		TBC
	clean air filter in convector heater	X	X	X				X	X	X	X					X	X	X		X	X		TBC
	install / repair / replace / top up pipe insulation	X		X	X			X			X	X				X		X				X	TBC
	insulate boilers / DHW cylinders							X						X				X				X	TBC
Lighting	replace old fluorescents with H/F HPF fittings	X		X	X				X	X	X	X	X		X	X	X	X		X	X		TBC
	replace tungsten lamps	X						X	X								X	X					TBC
	install / rearrange / reposition lighting controls	X		X	X			X			X				X								TBC
Good House-keeping	clean lamps & fittings	X						X		X							X	X					Varies
	clean windows / roof lights	X			X	X		X	X	X				X		X			X	X	X		Varies

Appendix 1 Range of Measure to be undertaken

Appendix 2 Programme of Works

Proposed Programme of Works	Funding Stream	Surveys	Obtain Quotations	Quotation Acceptance	Further investigation on site	Detailed Design	Preparing Specification & Tender documents	Out to Tender	Tender Acceptance	Start on site	Completion on site
PHASE 1											
"Quattroseal" Draughtproofing	CEEF										Complete
Insulation (loft & cavity) - North	CEEF/EEIF									Feb-06	May-06
Insulation (loft & cavity) - South	CEEF/EEIF									Feb-06	Apr-06
Heating Works (TRV's) - North	CEEF					Apr-06	May-06	May-06	Jun-06	Jul-06	Aug-06
Heating Works (TRV's) - South	CEEF	ongoing				Apr-06	May-06	May-06	Jun-06	Jul-06	Aug-06
Lighting Feasibility	n/a	ongoing			May-06	TBC					
PHASE 2											
"Quattroseal" Draughtproofing - North	CEEF									Mar-06	May-06
"Quattroseal" Draughtproofing - South	CEEF									Mar-06	May-06
Insulation (loft & cavity) - North	CEEF/EEIF					May-06	May-06	Jun-06	Jul-06	Jul-06	Aug-06
Insulation (loft & cavity) - South	CEEF/EEIF					May-06	May-06	Jun-06	Jul-06	Jul-06	Aug-06
Heating Works (TRV's) - North	CEEF	Jun-06				Jul-06	Jul-06	Aug-06	Sep-06	Oct-06	Oct-06
Heating Works (TRV's) - South	CEEF	Jun-06				Jul-06	Jul-06	Aug-06	Sep-06	Oct-06	Oct-06
Lighting Feasibility	n/a	TBC			TBC						
PHASE 3											
"Quattroseal" Draughtproofing	CEEF	May-06					Jun-06	Jun-06	Jul-06	Jul-06	Aug-06
Other											
Biomass Installation Contribution	CEEF									Dec-05	Jan-06
Building Energy Management Systems	CEEF	ongoing	May-06	Jun-06						Jul-06	Aug-06
Cleaning of heater filters	n/a	No cleaning to be funded via CEEF / EEIF - No quantifiable energy saving									
Variable speed drives	CEEF									Mar-06	Apr-06
Automatic pool covers	CEEF									Mar-06	Apr-06

Appendix 3 -

02/05/2006

£ 439,537.50

£ 58,781.69

£ 498,319.19

£ 156,969.79

£ 49,010.45

£ 205,980.24

PACEEF Expenditure - Central Energy Efficiency Fund

SUM

SUM

SUM

SUM

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SUM

Ref	Building	Works	ESTIMATED				ACTUAL		
			Accepted Value (Excl VAT)	Accepted	Fee estimate	Proj Total cost estimate (excl VAT)	Invoice (Excl VAT & Fee)	Fee	Final Account Value (excl VAT)
PACEEF / 0001	Kingussie Primary School	Quattro Seal Draughtproofing	£ 4,807.00	27/10/2005	£ 672.98	£ 5,479.98	£ 4,728.50	£ 661.99	£ 5,390.49
PACEEF / 0002	Kingussie Primary School	Quattro radiator panels	£ 317.97	27/10/2005	£ 44.52	£ 362.49	£ 252.45	£ 35.34	£ 287.79
PACEEF / 0003	Kingussie Primary School Nursery	Quattro Seal Draughtproofing	£ 2,210.25	27/10/2005	£ 309.44	£ 2,519.69	£ 601.00	£ 84.14	£ 685.14
PACEEF / 0004	Inverness Royal Academy	Quattro Seal Draughtproofing	£ 4,837.87	27/10/2005	£ 677.30	£ 5,515.17	£ 4,970.87	£ 695.92	£ 5,666.79
PACEEF / 0005	Caol Primary School	Quattro Seal Draughtproofing	£ 6,158.00	04/11/2005	£ 862.12	£ 7,020.12	£ 5,960.50	£ 834.47	£ 6,794.97
PACEEF / 0006	Caol Primary Sch Library & Nursery	Quattro Seal Draughtproofing	£ 1,118.00	04/11/2005	£ 156.52	£ 1,274.52	£ 732.37	£ 102.53	£ 834.90
PACEEF / 0007	Carrbridge Primary School	Quattro Seal Draughtproofing	£ 1,200.60	04/11/2005	£ 168.08	£ 1,368.68	£ 950.60	£ 133.08	£ 1,083.68
PACEEF / 0008	Golspie High School	Quattro Seal Draughtproofing	£ 3,196.75	04/11/2005	£ 447.55	£ 3,644.30	£ 2,464.00	£ 344.96	£ 2,808.96
PACEEF / 0009	Kinmylies Primary School	Quattro Seal Draughtproofing	£ 2,674.00	04/11/2005	£ 374.36	£ 3,048.36	£ 2,500.75	£ 350.11	£ 2,850.86
PACEEF / 0010	Kinmylies Primary School	Quattro Seal Draughtproofing	£ 784.00	04/11/2005	£ 109.76	£ 893.76	£ 747.25	£ 104.62	£ 851.87
PACEEF / 0011	Nairn Academy	Quattro Seal Draughtproofing	£ 6,072.00	02/12/2005	£ 850.08	£ 6,922.08	£ 5,759.25	£ 806.30	£ 6,565.55
PACEEF / 0012	Brora Primary School	Quattro Seal Draughtproofing	£ 5,224.62	02/12/2005	£ 731.45	£ 5,956.07	£ 4,736.37	£ 663.09	£ 5,399.46
PACEEF / 0013	Lybster Primary School	Quattro Seal Draughtproofing	£ 4,171.75	02/12/2005	£ 584.05	£ 4,755.80	£ 4,291.62	£ 600.83	£ 4,892.45
PACEEF / 0014	Pennyland Primary School	Quattro Seal Draughtproofing	£ 3,765.75	02/12/2005	£ 527.21	£ 4,292.96	£ 3,522.75	£ 493.19	£ 4,015.94
PACEEF / 0015	Coulhill Primary School	Quattro Seal Draughtproofing	£ 5,610.87	02/12/2005	£ 785.52	£ 6,396.39	£ 4,193.00	£ 587.02	£ 4,780.02
PACEEF / 0016	Kingussie High School (PA10200)	Quattro Seal Draughtproofing	£ 18,337.15	17/11/2005	£ 2,567.20	£ 20,904.35	£ 15,196.89	£ 2,127.56	£ 17,324.45
PACEEF / 0017	Wick High School (PA20306)	Quattro Seal Draughtproofing	£ 14,210.62	17/11/2005	£ 1,989.49	£ 16,200.11	£ 5,522.12	£ 773.10	£ 6,295.22
PACEEF / 0018	Draughtproofing North Phase 2 (PA90162)	Quattro Seal Draughtproofing	£ 45,632.57	06/03/2006	£ 6,388.56	£ 52,021.13	£ 2,134.12	£ 4,791.42	£ 6,925.54
PACEEF / 0019	Draughtproofing South Phase 2 (PA90163)	Quattro Seal Draughtproofing	£ 30,872.72	06/03/2006	£ 4,322.18	£ 35,194.90	£ -	£ 3,241.64	£ 3,241.64
PACEEF / 0020	Insulation North Phase 1 (PA90165)	Roof & cavity insulation	£ 111,175.65	17/01/2006	£ 15,564.59	£ 126,740.24	£ 25,565.00	£ 11,673.44	£ 37,238.44
PACEEF / 0021	Insulation South Phase 1 (PA90164)	Roof & cavity insulation	£ 101,291.85	17/01/2006	£ 14,180.86	£ 115,472.71	£ -	£ 10,635.64	£ 10,635.64
PACEEF / 0022	Lochaber High School	Quattro Seal Draughtproofing	£ 26,884.87	09/02/2006	£ 3,763.88	£ 30,648.75	£ 24,100.12	£ 3,374.02	£ 27,474.14
PACEEF / 0023	Dornoch Academy	Quattro Seal Draughtproofing	£ 9,060.62	26/01/2006	£ 1,268.49	£ 10,329.11	£ 8,173.37	£ 1,144.27	£ 9,317.64
PACEEF / 0024	Park Primary School	Quattro Seal Draughtproofing	£ 5,195.75	26/01/2006	£ 727.41	£ 5,923.16	£ 5,140.62	£ 719.69	£ 5,860.31
PACEEF / 0025	Plockton High School	Quattro Seal Draughtproofing	£ -		£ -	£ -	£ -	£ -	£ -
PACEEF / 0026	Heating Controls North Phase 1	TRV's, pipe insulation etc	£ -		£ -	£ -	£ -	£ 1,750.00	£ 1,750.00
PACEEF / 0027	Heating Controls South Phase 1	TRV's, pipe insulation etc	£ -		£ -	£ -	£ -	£ 1,751.00	£ 1,751.00

PACEEF / 0028	Dingwall Primary School	Contribution to biomass boiler	£ 17,545.00		no fee	£ 17,545.00	£ 17,545.00	0	£ 17,545.00
PACEEF / 0029	Culloden Library	Heating controls upgrade	£ 2,123.27		no fee	£ 2,123.27	£ 2,123.27	0	£ 2,123.27
PACEEF / 0030									
PACEEF / 0031	Invergordon Swimming Pool	AHU Variable Speed Drives	£ 2,254.00	06/03/2006	£ 315.56	£ 2,569.56	£ 2,254.00	£ 236.67	£ 2,490.67
PACEEF / 0032	Alness Swimming Pool	AHU Variable Speed Drives	£ 734.00	06/03/2006	£ 102.76	£ 836.76	£ 734.00	£ 77.07	£ 811.07
PACEEF / 0033	Thurso Swimming Pool	Pool cover	£ 588.00	22/02/2006	£ 82.32	£ 670.32	£ 588.00	£ 61.74	£ 649.74
PACEEF / 0034	Brora Swimming Pool	Pool cover	£ 1,482.00	22/02/2006	£ 207.48	£ 1,689.48	£ 1,482.00	£ 155.61	£ 1,637.61
PACEEF / 0035									
PACEEF / 0036	Draughtproofing Phase 3	Quattro Seal Draughtproofing	TBC						

Appendix 4 -

Current C.E.E.F. Expenditure Summary

02/05/2006

NB: All costs exclude VAT & include FEES (except where noted)

<u>Contracts</u>	Current Spend	Estimated	<u>Notes</u>
PACEEF invoiced works to date	£ 205,980		£ 498,319.19 Accepted works to date
Building Energy Management Systems	£ -	£2,000	to be developed
	£ 205,980	Sub - total	
 <u>Contract based purchases (excl fees)</u>			
<u>PACEEF 0030 - General CEEF expenditure</u>			
timers 500 No	£ 3,275		£ 1,080.40 outstanding
Energy Accounting Software	£ 10,616		
Infra Red camera	£ 7,600		
Admin equipment	£ 165		
Thermostatic Radiator Valves	£ -	£ 5,000	to be developed
	£ 21,656	Sub - total	
 <u>Admin (excl fees)</u>			
Staff Costs	£ 12,300		
	£ 12,392	Sub - total	
	£ 240,028	Grand Total	

Appendix 5 Energy Saving Investment Phase 2

Site	kWh	Cost(£)	p/Unit	£/m2	NPI	Gas	Oil
Crown Primary School	908,299	16,561	1.82	6.37	Poor	Yes	-
Duncan Forbes Primary School	521,450	15,771	3.02	7.83	Poor	-	Yes
Kinmylies Primary School	549,411	15,605	2.84	8.77	Poor	-	Yes
Abernethy Primary School	508,450	14,573	2.87	7.37	Poor	-	Yes
Kingussie Primary School	465,460	14,160	3.04	9.90	Poor	-	Yes
Strathburn House	431,902	13,814	3.2	17.27		-	Yes
Dingwall Divisional Education Office	462,930	13,803	2.98	17.22		-	Yes
Seaforth House Resource Centre	541,997	13,141	2.42	12.76		-	Yes
Avoch Primary School	445,150	12,940	2.91	7.67	Poor	-	Yes
Smithton Primary School	464,841	12,303	2.65	6.24	Poor	-	Yes
Muirtown Primary School	591,485	12,187	2.06	5.57	Poor	Yes	-
Obsdale Primary School	420,312	11,793	2.81	9.78	Poor	-	Yes
Cradlehall Primary School	372,388	11,704	3.14	8.33	Poor	-	Yes
Hillhead Primary School	242,394	11,471	4.73	7.35		-	-
Craighill Primary School	394,276	11,059	2.8	5.30	Poor	-	Yes
Graham House Resource Centre	379,664	10,545	2.78	13.57		-	Yes
Margaret Carnegie Hostel	387,887	10,030	2.59	3.77		-	Yes
Isobel Rhind Centre	301,274	8,866	2.94	7.78		-	Yes
South Primary School	170,792	7,858	4.6	6.92		-	-
Watten Primary School	177,174	7,670	4.33	12.91		-	-
Wick Assembly Rooms	263,430	7,286	2.77	5.49		-	Yes
Broadford Primary School	220,935	7,285	3.3	9.02	Poor	-	Yes
Mallaig Primary School	221,045	6,946	3.14	7.63	Poor	-	Yes
Conon Family Resource Centre	204,384	6,229	3.05	8.44		Yes	Yes
Kyle Primary School	103,369	5,367	5.19	6.17		-	-
Deshar Primary School	98,178	4,744	4.83	9.36		-	Yes
Keiss Primary School	96,074	4,533	4.72	5.97		-	-
Sleat Primary School	68,044	3,444	5.06	5.05		-	-
Invergarry Primary School	54,187	3,172	5.85	13.67		-	-
Kyleakin Primary School	45,886	2,783	6.07	5.92		-	-
Struan Primary School	62,081	2,724	4.39	9.59		-	-
Achaphubuil Primary School	81,377	2,573	3.16	9.75	Poor	-	Yes
Loch Duich Primary School	56,619	2,560	4.52	7.15		-	-
Merkinch Nursery School	79,169	1,993	2.52	7.58		Yes	-
Kinbrace Primary School	44,177	1,816	4.11	9.27		-	-
Strathconon Primary School	25,410	1,504	5.92	6.81		-	-
Highland Council Headquarters	3,561,162	104,120	2.92	9.85		Yes	-
Dingwall County Buildings	349,118	16,870	4.83	6.90		-	-
Inverness Town House	955,783	18,454	1.93	5.77		Yes	-
Wick Council Offices	308,470	12,164	3.94	5.11		Yes	-
Lochaber House	84,187	4,170	4.95			-	-
Fulton House	97,322	4,884	5.02			-	-

		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20			
		Lochaber High School	Wick High School	Grantown Grammar	Golspie High School	Dornoch Academy	Wick Swimming Pool	Kingussie High School	Charleston Academy	Plockton High School	Nairn Academy	Nairn Swimming Pool	Golspie Swimming Pool	Brora Primary School	Lybster Primary School	Duthac House	Dingwall Primary School	Caol Primary School	Pennyland Primary School	Coulhill Primary School	Park Primary School	Estimated saving (£'s) per year for every £1000 invested	Funding Stream (CEEF / Energy Efficiency Investment Fund)	
Draught-proofing	install / replace draught seals to windows / doors	X	X		X	X		X		X				X			X		X	X	X	627	CEEF	
Insulation	install / top up insulation in roof space	X	X		X	X		X	X	X			X		X		X	X	X	X		501	CEEF	
	install / top up insulation in external walls	X	X		X			X	X	X			X	X			X	X	X	X		104	EEIF	
Heating System - Controls & Insulation	install / repair replace thermostat	X	X	X	X			X					X				X		X	X		10%	EEIF	
	install / repair / replace TRV		X	X	X			X	X	X	X	X			X		X		X	X		10%	EEIF	
	install / repair / replace heating controls	X	X	X	X		X	X		X	X				X		X		X	X		10%	EEIF	
	install / repair / replace zone valve				X				X	X					X				X	X		TBC	TBC	
	clean air filter in convector heater	X	X	X				X	X	X	X						X	X		X	X		TBC	TBC
	install / repair / replace / top up pipe insulation	X		X	X			X			X	X						X		X		TBC	TBC	
	insulate boilers / DHW cylinders							X						X				X		X		TBC	TBC	
	Lighting	replace old fluorescents with H/F HPF fittings	X		X	X				X	X	X	X	X		X		X		X	X		TBC	TBC
replace tungsten lamps		X						X	X													TBC	TBC	
install / rearrange / reposition lighting controls		X		X	X			X			X				X							TBC	TBC	
Good House-keeping	clean lamps & fittings	X						X		X							X	X				Varies	TBC	
	clean windows / roof lights	X			X	X		X	X	X				X				X	X	X		Varies	TBC	

Appendix 6 Funding Streams

02/05/2006
PAEEIF Expenditure - Energy Efficiency Investment Fund

£ 35,320.00 £ - £ 35,320.00 £ 35,320.00 £ - £ 35,320.00
 SUM SUM SUM SUM SUM SUM

Ref	Building	Works	ESTIMATED				ACTUAL		
			Accepted Value (Excl VAT)	Accepted	Fee estimate	Proj Total cost estimate (excl VAT)	Invoice (Excl VAT & Fee)	Fee	Final Account Value (excl VAT)
PAEEIF / 0001	Sleat Primary School	Contribution to ECS70192 Air Heat Pump	£ 9,000.00	19/04/2006	£ -	£ 9,000.00	£ 9,000.00	£ -	£ 9,000.00
PAEEIF / 0002	Broadford Primary School	Contribution to ECS70205 Air Heat Pump	£ 9,000.00	19/04/2006	£ -	£ 9,000.00	£ 9,000.00	£ -	£ 9,000.00
PAEEIF / 0003	Gergask Primary School	Contribution to ECS10156 Air Heat Pump	£ 5,500.00	19/04/2006	£ -	£ 5,500.00	£ 5,500.00	£ -	£ 5,500.00
PAEEIF / 0004	Millbank Primary School	Contribution to ECS50148 Air Heat Pump	£ 9,500.00	19/04/2006	£ -	£ 9,500.00	£ 9,500.00	£ -	£ 9,500.00
PAEEIF / 0005	St Clement's Primary School	Contribution to ECS60503 Air Heat Pump	£ 2,320.00	19/04/2006	£ -	£ 2,320.00	£ 2,320.00	£ -	£ 2,320.00

Appendix 7 EEIF Expenditure

Appendix 8 (a) Predicted Costs and Saving of Phase 2 Works, sheet 1 of 3

PACEEF 0038 - INSULATION WORKS Ph 2 (NORTH)

				LOFT			CAVITY WALL			LOFT + CAVITY OVERALL SUMMARY (North)					
				SUM	SUM	Average	SUM	SUM	Average	SUM	SUM	SUM	SUM	Average	
				£ 15,143	£ 69,196	7.5	£ 9,780	£ 34,239	3.8	454550	161	£ 24,923	£ 103,435	4.2	
Ref	Site	Loft Insul (Y/N)	Cavity Insul (Y/N)	Total Loft Insul Saving (£/yr)	Estd Total Cost (£)	Estd Loft Insul Payback (yrs)	Total Cav Insul Saving (£/yr)	Estd Total Cost (£)	Estd Cav Insul Payback (yrs)		Loft + Cavity kWh saving (kWh/yr)	CO2 saving (T)	Loft + Cavity Total saving (£/yr)	Loft + Cavity Total Cost (£/yr)	Combined Payback (yrs)
34	Hillhead Primary School	N	Y				820.47	2,124.92	2.6		11388	4.9	820.47	2,124.92	2.6
39	South Primary School	N	Y				933.45	2,417.52	2.6		12956	5.6	933.45	2,417.52	2.6
40	Watten Primary School	Y	N	957.36	1,620.53	1.7					13287	5.7	957.36	1,620.53	1.7
47	Keiss Primary School	Y	Y	694.37	4,188.33	6.0	479.34	1,241.43	2.6		16290	7.0	1,173.71	5,429.76	4.6
27	Dingwall Divisional Education Office	N	Y				516.34	2,902.07	5.6		15552	4.0	516.34	2,902.07	5.6
29	Avoch Primary School	Y	Y	271.22	3,742.80	13.8	676.78	3,803.83	5.6		28554	7.4	948.00	7,546.63	8.0
32	Obsdale Primary School	Y	Y	819.59	10,770.61	13.1	450.37	2,531.28	5.6		38252	9.9	1,269.96	13,301.89	10.5
35	Craighill Primary School	N	Y				395.76	2,224.35	5.6		11920	3.1	395.76	2,224.35	5.6
38	Isobel Rhind Centre	Y	Y	648.57	8,372.54	12.9	314.73	1,768.93	5.6		29015	7.5	963.29	10,141.47	10.5
44	Conon Family Resource Centre	Y	Y	860.82	3,223.25	3.7	284.70	1,600.18	5.6		34504	9.0	1,145.52	4,823.42	4.2
56	Strathconon Primary School	Y	N	112.81	942.49	8.4					1566	0.7	112.81	942.49	8.4
B	Dingwall County Buildings	Y	Y	4020.07	6,615.67	1.6	1,883.37	4,877.70	2.6		81935	35.2	5,903.44	11,493.37	1.9
37	Margaret Carnegie Hostel	Y	N	891.18	11,602.19	13.0					26843	7.0	891.18	11,602.19	13.0
42	Broadford Primary School	Y	Y	257.50	3,636.84	14.1	301.63	1,695.32	5.6		16841	4.4	559.14	5,332.16	9.5
45	Kyle Primary School	Y	Y	639.11	4,095.34	6.4	986.03	2,553.71	2.6		22556	9.7	1,625.15	6,649.05	4.1
48	Sleat Primary School	Y	Y	2337.90	4,428.91	1.9	612.95	1,587.46	2.6		40956	17.6	2,950.85	6,016.36	2.0
50	Kyleakin Primary School	Y	Y	2325.63	3,833.17	1.6	459.71	1,190.59	2.6		38658	16.6	2,785.34	5,023.76	1.8
51	Struan Primary School	Y	Y	215.15	1,543.62	7.2	71.54	185.29	2.6		3979	1.7	286.70	1,728.91	6.0
53	Loch Duich Primary School	N	Y				404.70	1,048.13	2.6		5617	2.4	404.70	1,048.13	2.6
55	Kinbrace Primary School	Y	Y				187.86	486.54	2.6		3881	1.7	279.61	1,066.19	3.8

NB: The above assessment assumes 50mm cavity walls and makes no allowance for increased rates for "out of hours" working.

Removed

- 41 Wick Assembly Rooms
- D Wick Council Offices
- 26 Strathburn House
- 28 Seaforth House Resource Cent
- 36 Graham House Resource Centre

Notes:

- No opportunities
- No opportunities
- Removed
- Done under phase 1
- Short life of site

Appendix 8 (b) Predicted Costs and Saving of Phase 2 Works, sheet 2 of 3

PACEEF 0039 - INSULATION WORKS Ph 2 (SOUTH)

Ref	Site	Loft Insul (Y/N)	Cavity Insul (Y/N)	LOFT			CAVITY WALL			LOFT + CAVITY OVERALL SUMMARY (South)					
				SUM	SUM	Average	SUM	SUM	Average	SUM	SUM	SUM	SUM	Average	
				£ 16,025	£ 100,378	7.5	£ 5,154	£ 33,578	6.0	687662	174	£ 21,179	£ 133,956	6.6	
				Total Loft Insul Saving (£/yr)	Estd Total Cost (£)	Estd Loft Insul Payback (yrs)	Total Cav Insul Saving (£/yr)	Estd Total Cost (£)	Estd Cav Insul Payback (yrs)		Loft + Cavity kWh saving (kWh/yr)	CO2 saving (T)	Loft + Cavity Total saving (£/yr)	Loft + Cavity Total Cost (£/yr)	Combined Payback (yrs)
24	Abernethy Primary School	Y	N	2033.95	7,292.38	3.6					61263	15.9	2,033.95	7,292.38	3.6
25	Kingussie Primary School	Y	N	1909.02	6,809.33	3.6					57501	15.0	1,909.02	6,809.33	3.6
46	Deshar Primary School	Y	N	468.47	1,769.67	3.8					14111	3.7	468.47	1,769.67	3.8
21	Crown Primary School	Y	Y	1067.17	14,229.43	13.3	192.49	2,309.57	12.0		80996	15.4	1,259.65	16,539.00	13.1
22	Duncan Forbes Primary School	N	Y				454.38	2,553.84	5.6		13686	3.6	454.38	2,553.84	5.6
23	Kinmylies Primary School	Y	Y	1055.96	13,700.25	13.0	721.87	4,057.26	5.6		53549	13.9	1,777.83	17,757.51	10.0
30	Smithton Primary School	Y	Y	920.48	11,742.82	12.8	660.51	3,712.37	5.6		47620	12.4	1,580.99	15,455.19	9.8
33	Cradlehall Primary School	Y	Y	1084.30	14,107.22	13.0	793.14	4,457.85	5.6		56550	14.7	1,877.45	18,565.07	9.9
A	Highland Council Headquarters	Y	Y	1057.01	8,053.67	7.6	993.22	11,917.16	12.0		131831	25.0	2,050.23	19,970.82	9.7
C	Inverness Town House	Y	N	980.20	7,548.37	7.7					63027	12.0	980.20	7,548.37	7.7
43	Mallaig Primary School	Y	Y	456.40	5,935.07	13.0	319.48	1,795.64	5.6		23370	6.1	775.88	7,730.71	10.0
49	Invergarry Primary School	Y	Y	514.96	1,797.44	3.5	146.41	379.18	2.6		9179	3.9	661.37	2,176.62	3.3
52	Achaphubuil Primary School	N	Y				44.72	251.35	5.6		1347	0.4	44.72	251.35	5.6
E	Lochaber House	Y	Y	2376.46	3,913.31	1.6	209.55	542.72	2.6		35892	15.4	2,586.02	4,456.03	1.7
F	Fulton House	Y	Y	2101.11	3,479.24	1.7	618.05	1,600.68	2.6		37740	16.2	2,719.17	5,079.92	1.9

NB: The above assessment assumes 50mm cavity walls and makes no allowance for increased rates for "out of hours" working.

Removed

- 31 Muirtown Primary School
- 54 Merkinch Nursery School

Notes:

- No opportunities
- Building no longer used

PACEEF 0038 & PACEEF 0039 COMBINED SUMMARY				
Loft + Cavity kWh saving (kWh/yr)	CO2 saving (T)	Loft + Cavity Total saving (£/yr)	Loft + Cavity Total Cost (£/yr)	Combined Payback (yrs)
1,142,211	335	£ 46,102	£ 237,391	5.4

Appendix 8 (c) Predicted Costs and Saving of Phase 2 Works, sheet 3 of 3

PACEEF 0040 - Lighting Upgrade Phase 1

137122	59	£	14,554	£	139,163	11
SUM	SUM		SUM		SUM	Average

Ref	Site	Area	Estimated kWh saving (kWh/yr)	Estimated CO2 saving (T)	Estimated Total saving (£/yr)	Estimated Total Cost (£)	Payback (yrs)
04	Golspie High School	Suth	24758	10.6	2,489.88	15,023.00	6.0
07	Kingussie High School	Loch	15332	6.6	1,541.89	7,482.17	4.9
08	Charleston Academy	Inv	47920	20.6	4,819.36	18,770.25	3.9
12	Golspie Swimmin Pool	Suth	710	0.3	71.38	1,195.89	16.8
14	Lybster Primary School	Caith	4071	1.8	473.62	3,825.74	8.1
16	Dingwall Primary School	R&C	25950	11.2	3,019.24	54,928.11	18.2
20	Park Primary School	R&C	18383	7.9	2,138.82	37,937.98	17.7

NB: The above assessment makes no allowance for increased rates for "out of hours" working.