

Central Energy Efficiency Fund Evaluation

July 2011



INTRODUCTION

The Central Energy Efficiency Fund (CEEF), launched in 2004, is one of the Scottish Government's key vehicles for delivering energy efficiency as well as renewable energy measures and reducing carbon emissions in the public sector in Scotland.

The £20 million CEEF funding was split between the 32 Scottish Local Authorities (L.A.s) (£15 million with amounts allocated depending upon the authorities' population and their geographical area), NHS Scotland (£4 million) and Scottish Water (£1 million). The funding was provided over 2004/05 and 2005/06 to implement energy efficiency measures. From 2008, the L.A.s and Scottish Water could spend CEEF on renewable energy measures too. The money is ring-fenced for spend on measures which reduce energy consumption and carbon emissions on the relevant organisation's estate and which have a simple payback of no more than 5 years for energy efficiency or 7.5 years for renewable measures. The savings are paid back in to the fund until the original loan is paid off so further savings can be reinvested in more measures. Savings generated are then reinvested in further carbon reducing measures or for frontline services.

The Energy and Climate Change Directorate monitor the CEEF fund in relation to Local Authorities and Scottish Water. However, the individual Local Authorities (and Scottish Water) are responsible for managing their own CEEF allocation and identifying potential capital projects which are recorded on the CEEF website.

For NHSScotland control is in the hands of the Scottish Government Health Directorates (SGHD). The SGHD has passed responsibility for the day-to-day management of the Fund to Health Facilities Scotland (HFS), which has in turn, charged the Scottish Engineering Technology Advisory Group (SETAG) with the running of that Fund. SETAG is one of the four core Groups within HFS and is made up of senior engineers from within NHSScotland.

SETAG set up an Assessment Panel to assess all submissions made for access to the Fund. The Panel consists of nine members, two of whom are employed by HFS and seven being operational engineers from a variety of Board areas. The CEEF Assessment Panel meets on a bi-monthly basis to assess, reject, or authorise Bids.

The Scottish Government also funds the Carbon Trust (C.T.) to support public sector organisations to reduce their energy costs and emissions. A key part of this is C.T.'s provision of energy efficiency and change management advice to public bodies through their Carbon Management Programme, which is helpful for good utilisation of CEEF money. To date, almost 100 Scottish organisations have completed the Carbon Management Programme, including NHS Boards, the Scottish Government and all Scottish local authorities. The Carbon Trust offer a follow up programme called Carbon Management Revisited to review, refresh and progress forward.

PREVIOUS AND PRESENT EVALUATION

Health Facilities Scotland has commenced a review of the CEEF scheme for Scottish Government Health Directorates, in relation to NHS Scotland's use of the fund. Their report will consider views on CEEF, the savings realised from approved CEEF schemes, and the total net value of the Revenue Fund remaining for reinvestment in new schemes. The terms and conditions of this side of the funding have not changed since CEEF's inception. If the review suggests that improvements can be made, representation will be made by NFS to SGHD to make the appropriate changes.

AEA Energy and Environment carried out an evaluation of the CEEF in 2006 in relation to the Local Authorities and published a report in 2007. As a result of that evaluation, the CEEF website was transformed and more flexibility was introduced in to the scheme. Some of that flexibility has led to changes to the scheme for Local Authorities and Scottish Water:

Renewables

Renewable energy projects are eligible for CEEF funding on buildings where all possible energy efficiency measures have been installed. Any CEEF money invested in these projects has to be paid back to the fund in no more than 7.5 years. The payback calculations on solar electricity panels and wind turbines can incorporate revenue from the Feed in Tariff (FIT) where appropriate. CEEF will allow for the incorporation of Renewable Heat Incentive too.

Part funding

It is possible to part fund projects (including renewable projects) with CEEF money. Any CEEF investment must contribute to carbon savings and meet the required payback.

AMR

Purchase and installation of AMR equipment as well as setting up of initial data flow between the supplier and customer, who must pay for the ongoing data collection and maintenance costs themselves. Each Local Authority is responsible for ensuring best value prior to installation. The impact on current meter charges should be clearly identified and the installation should not restrict any potential change of utility supplier and should be capable of providing data that can be used in supplier billing systems. A maximum payback of 7.5 years has been set for AMR.

Voltage optimisation

This equipment is eligible provided the estimated simple payback is within 5 years.

Carbon Trust Standard

The Standard is available to organisations who can demonstrate year-on-year absolute CO2 savings, under a 5 year maximum payback. This decision was made to assist Local Authorities with the CRC Energy Efficiency Scheme which, when constructing its performance league table, takes in to account such activity to manage emissions. Costs vary depending on energy usage but Local Authorities would probably pay between £5,000 and £15,000.

Energy efficiency is at the heart of Scotland's economic recovery and key to meeting the ambitious target to reduce greenhouse gas emissions by 80% by 2050 as required by the Climate Change Act. And as part of our Leading by Example agenda, the Conserve and Save Energy Efficiency Action Plan, published in October 2010, committed the Scottish Government to undertake another evaluation of CEEF. The purpose of this evaluation is to establish where energy savings have been most effectively achieved and to identify the key barriers to investment. This will inform our work to maximise existing funds at a time of constrained public spending.

The evaluation methodology has comprised three related activities: a desk based analysis of the savings achieved to date; interviews with some of the managers; and communication with the stakeholders involved in the CEEF programme.

CEEF PROJECTS AND SPEND

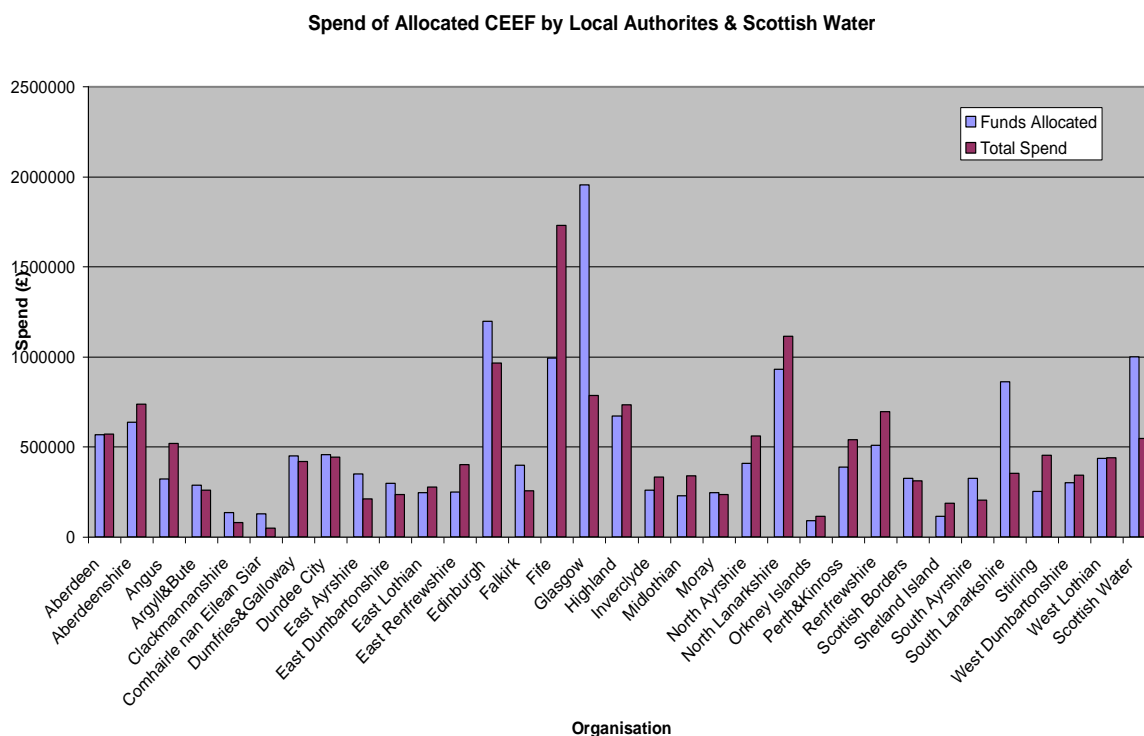
All the following figures demonstrate data from the beginning of the scheme to 07 October 2010.

Spend of Allocated CEEF

The following graphs show the funding allocated to each organisation and next to that, the actual spend the organisation has made with that money¹. The recycling nature of the scheme, attained through payback and interest, accounts for the graphs showing some organisations spending more than their original allocation. The NHS Scotland Health Boards are generally spending their allocation. The graphs demonstrate the variation with which organisations make use of the CEEF.

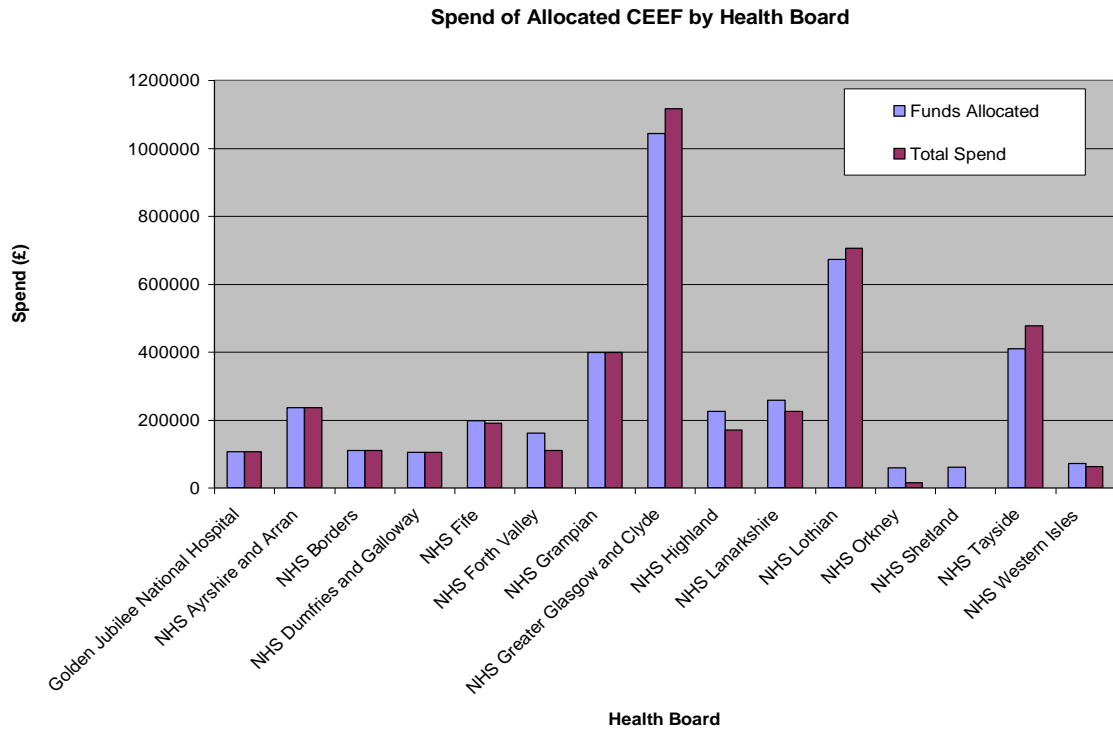
Local Authority and Scottish Water total spend is £15,431,767; NHSScotland total spend is £4,020,439 by, bringing the total CEEF spend to £19,452,206.

Figure 1



¹ £378,585 of Glasgow City Council's spend was for activities authorised and not subject to standard CEEF terms and conditions (Windfarm study and Sustainable Glasgow).

Figure 2



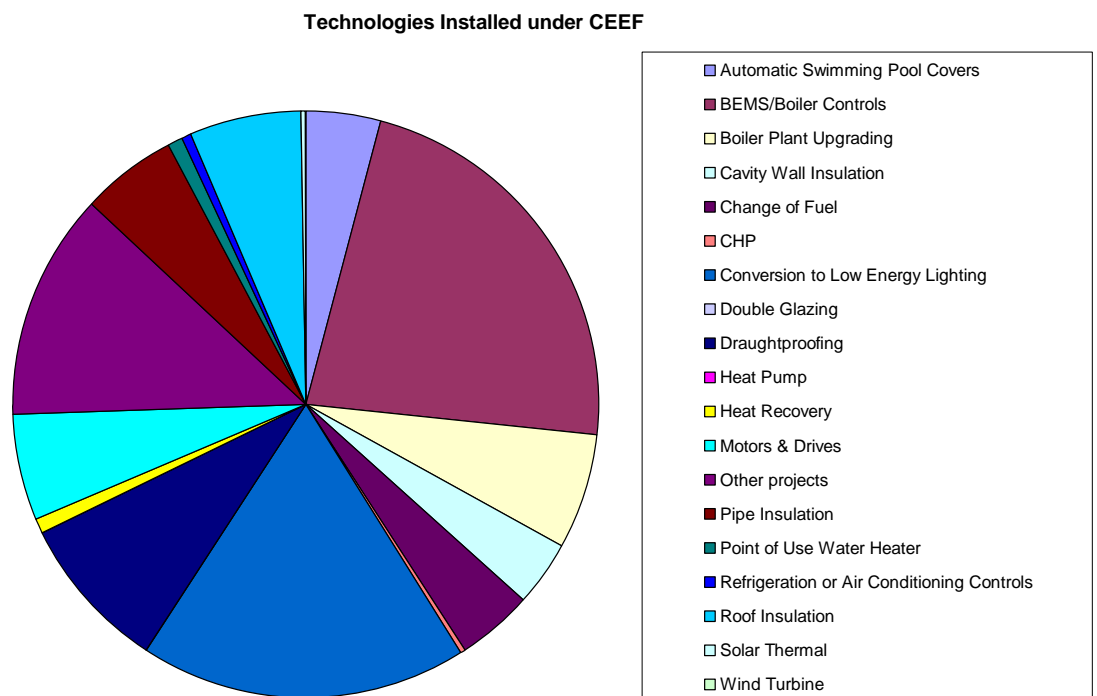
Number of Projects Implemented

The Local Authorities and Scottish Water have implemented 1542 CEEF projects and NHSScotland, 93 projects. Therefore 1635 projects have been delivered using CEEF funding from the beginning of the scheme to 7 October 2010.

Technologies Installed

Figure 3, below, shows the technologies² installed by the Local Authorities, NHS Scotland and Scottish Water under CEEF. The most implemented measures are conversion to low energy lighting and Building Energy Management System (BEMS)/building controls. The least implemented measures relate to renewable measures. The introduction of the Feed in Tariff (FIT) in April 2010 and recent agreement that CEEF should factor in FIT into CEEF's payback calculations for solar PV and wind installations could result in a higher number of renewable undertakings.

Figure 3

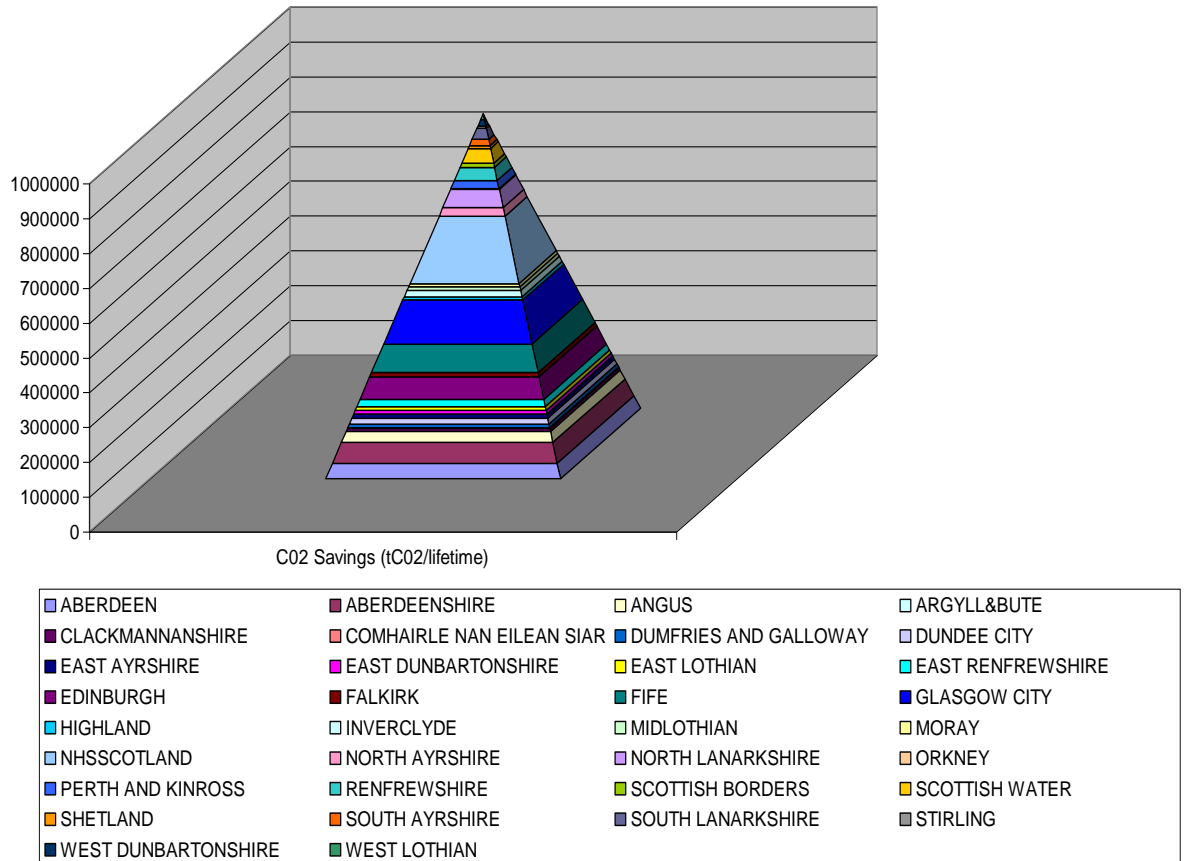


² 'Other projects' include technologies such as lighting controls, voltage optimisation and smart meters.

Estimated Lifetime CO2 Savings

The following graph shows cumulative estimated lifetime CO2 Savings of 937,980 tCO₂, with NHSScotland providing 167,236 tCO₂ and Local Authorities and Scottish Water, 770,744 tCO₂ of that figure.

Figure 4

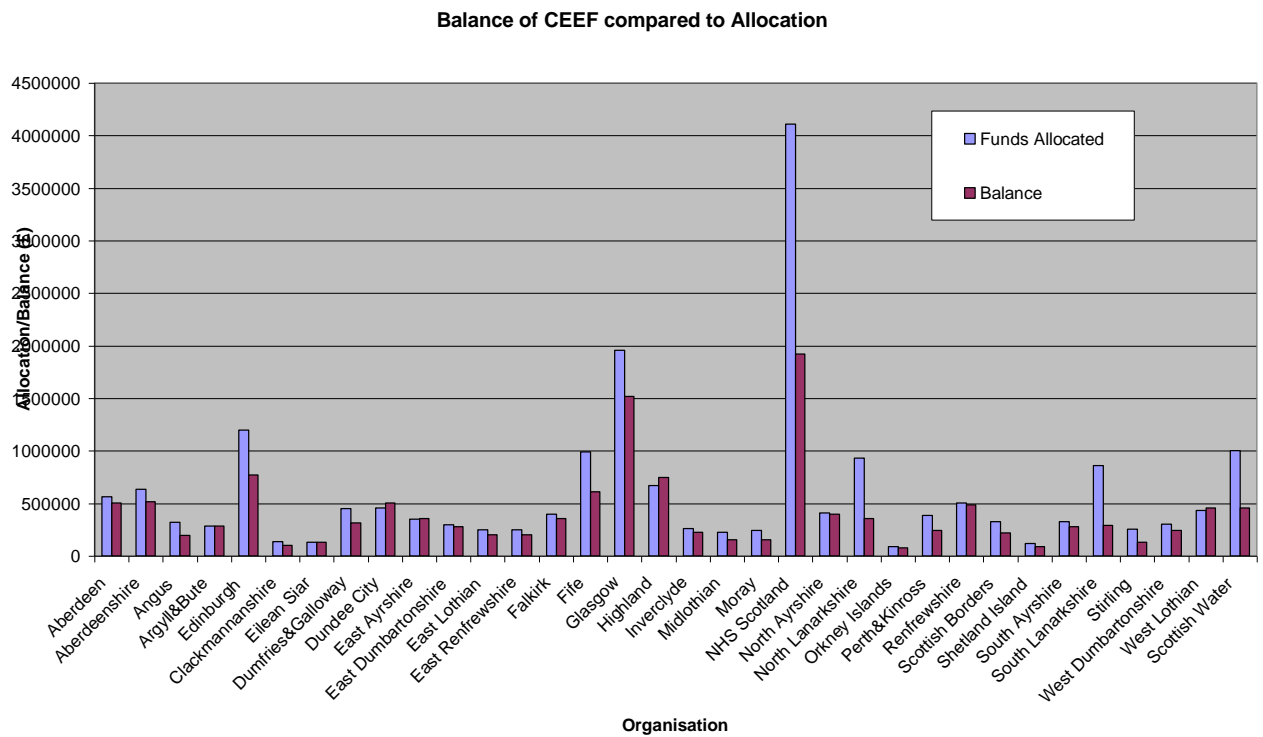


CEEF Balance

Figure 5, below, shows the CEEF balance of each of the organisations. The Local Authority and Scottish Water balance is £11,856,662 and the NHS CEEF balance stands at £1,922,142, bringing the total to £13, 778, 804.

If utilised for comparable projects to these implemented to date, the £11.86 million could save another 937,980 tCO₂/lifetime, not including further reinvestment from ongoing recycled funds.

Figure 5



CASE STUDY

The Sir Busby Sports Complex Matt offers indoor and outdoor sporting facilities to the Bellshill community in North Lanarkshire.

A combination of new efficient light fittings and controls has improved lighting levels, reduced overall energy consumption by nearly 10% and provided substantial cost savings.

- Annual energy savings of 10% worth more than £10,000
- Annual energy savings of 219,000kWh
- Annual CO2 savings of over 94 tonnes

The Carbon Trust assisted North Lanarkshire Council by identifying and prioritising energy saving opportunities and providing a prioritised implementation plan. This, in addition to £930,000 of 'spend to save' funding from the Scottish Government allowed the rapid implementation of energy efficiency measures.

The full case study can be read at <http://www.energy-efficiency.org/ceef/29.26.html>.

FUTURE FUNDING

The Conserve and Save: Energy Efficiency Action Plan committed the Scottish Government to investigate new and further funding options for implementing energy efficiency programmes, working closely with the Scottish Low Carbon Investment Project, the 2020 Group, and other appropriate groups to investigate alternative funding models.

Looking beyond the public purse as a source of funding for activity that requires significant additional resource, the Scottish Government and partner organisations have started work under the banner of the Scottish Low Carbon Investment project. This covers the areas of low carbon electricity, heat, energy efficiency and transport, and looks beyond ongoing or forecast investment activity to identify the range of available opportunities for international investment. The project looks to:

- assess the low carbon investment opportunities across private and public sectors Scotland-wide;
- assess the supply of related capital and of the appetite for investment in Scottish projects within the international investment community; and
- focus the 2011 low carbon investment conference on resource use and energy efficiency.

Subject to future spending reviews and parliamentary approval, we will also seek to establish a new public sector energy efficiency fund that will be open to both smaller and larger bodies and will be of sufficient scale to encourage more ambitious projects. discussions will be required with the sector to ensure that any future fund would be effective. however, as an example, we believe that £5 million of investment, with money allocated following a competitive bidding process, could deliver savings of over £15 million in energy bills and nearly 100,000 tonnes of CO₂ over a ten-year period.

Where no external funding is available, there must be senior level recognition of the benefits of investing in energy saving projects. payback is often very short, leading to quick realisation of future savings. We will engage with senior managers to ensure that energy saving projects with brief payback periods are not routinely ignored for financial reasons.

As part of our wider work to finance energy efficiency, we will consider how the public sector can best align itself more broadly with existing and prospective funding opportunities. One example of this is the prospect of significant extra funding to help regions and cities become more energy efficient, announced earlier this year by the European Commission. This has potential to benefit local authorities that are signed up to the covenant of Mayors, membership of which demonstrates commitment to go beyond a 20% emissions reduction by 2020 and can place local authorities well in any endeavours to secure European funding support for energy saving projects. We will support COSLA's ambition to encourage Scottish Lord Provosts to sign up to the Covenant of Mayors.

ISSUES AROUND IMPLEMENTATION

This section will focus on feedback from Local Authorities and Scottish Water, given HFS are currently undertaking their own CEEF evaluation.

Feedback from the Local Authority and Scottish Water Energy Managers is very positive regarding CEEF: for some, it is their only source of energy investment finance; it acts as a springboard for work; and is a good vehicle for leveraging extra money within an organisation.

Some of the feedback welcomed the flexibility of the scheme. The Scottish Government encourages feedback and suggestions from the Energy Managers in the best use of CEEF which has resulted in additional eligible measures, as well as projects outwith the standard terms and conditions of the scheme. Such a project includes the use of £250,000 of Glasgow City Council's CEEF money for Phase 2 of the Sustainable Glasgow Initiative. The Sustainable Glasgow Initiative aims to help Glasgow become one of Europe's most sustainable cities by 2020. The initiative started in late 2008 and has conducted a set of major feasibility studies, identifying technically and financially viable opportunities that would deliver 30% carbon emissions reductions in Glasgow by 2020.

Feasibility Studies

As part of this evaluation, the Scottish Government examined whether the ineligibility of feasibility studies for CEEF money was a barrier for pursuing more ambitious projects and considered allowing the fund to pay for feasibility studies for potential CEEF projects. General feedback indicated that assessments were easy enough to make and that projects had not been stopped through lack of a feasibility study. There was also the potential danger that much of the fund would be spent on feasibility studies for projects that would not go ahead. As CEEF is focused on saving carbon emissions this would not be a good use of public money. Therefore, following survey and interview results, we have decided not to pursue this option.

Payback periods

Feedback regarding payback periods was varied. Some Energy Managers thought the periods needed to be extended to allow larger scale projects to go ahead under CEEF, whilst others felt the payback periods were reasonable and gave a good return, and allowed their finance departments more security than a longer payback period would. The Scottish Government will continue to welcome proposals for any ambitious projects.

Finance

Relationships with finance departments have an effect on the use of CEEF with stronger relationships resulting in more projects and quicker spend. This may be down to a poor understanding of the programme which a clearer understanding might fix.

Another important aspect of finance relates to ring-fencing. Ring fencing bolsters energy efficient investment with non-CEEF funding but must be ring fenced as per the terms and conditions of the scheme.

Procurement: Framework Agreements

A potential barrier to the use of CEEF seems to be the procurement of products, which can delay work and prevent further spending. Procurement Scotland is currently undergoing a re-organisation as part of the wider Scottish Procurement Directorate restructure. Part of this process is considering future activities and priorities which will factor in the points raised under the CEEF consultation.

Opportunities for Communication between Energy Managers

At this stage the Scottish Energy Officer Network is the only real type of forum for Energy Managers to exchange and discuss CEEF case studies, value for money, tenders, and best practice. However a bi-monthly meeting may not be the most practical in helping Energy Managers make decisions on a day to day basis.

Website

The CEEF website is helpful in demonstrating predicted carbon saving results and cost savings. This evaluation has highlighted that the website is not being kept as up to date as preferred, perhaps due to changes in staff. The Energy Managers must keep the website up to date as per the terms and conditions of the scheme.

Energy Manager Resource

As noted in the Audit Scotland's Improving Energy Efficiency: A follow up report, published in December 2010, 'the recruitment and retention of appropriately trained energy management staff remains difficult...succession planning needs to be considered'. The dissemination of CEEF knowledge and practice within an organisation can be badly affected when an Energy Manager moves on from his/her post. This has had an affect on the number of projects implemented as well as the recording of that data. The evaluation itself has provided a driving force to rectify this issue and the Scottish Government will continue to work with the organisations involved in CEEF to strengthen the introduction of the fund to a new Energy Manager, and offer a more hand holding service in the first instance to new managers.

CONCLUSIONS

The CEEF is a valuable programme that, in some cases, provides the only source of energy investment finance. A real strength, which will be continued, is its flexibility which can be useful for a common sense approach whereby carbon emission reduction is the guiding principle. However, not as many projects have been implemented as had been originally envisaged. This evaluation and our annual publications of results will help to benchmark performance against other bodies and encourage implementation.

The Scottish Government, responsible for setting the terms and conditions of CEEF for the Local Authorities and Scottish Water, note the following points from the evaluation and subsequent required actions:

- Relationships between Energy Managers and finance teams are mixed and have an affect on the delivery of projects. Therefore, the Scottish Government will hold a seminar for Energy Managers and their finance colleagues to address issues of concern.
- Procurement and framework agreements will be explored with Procurement Scotland.
- The Scottish Government will revise the terms and conditions of the programme to reflect changes since its initial delivery.
- The Scottish Government will put together a starter pack for new Energy Managers consisting of terms and conditions, website and contact information. Introductory meetings can be held as a matter of course.
- The Scottish Government has set up an online forum for Energy Managers to discuss CEEF matters.
- The Scottish Government will publish benchmarked performance of the organisations involved in CEEF commencing 2012.
- In consideration of our ambitious 2020 and 2050 targets, payback periods will be extended to 7 years for energy efficiency measures and 10 years for renewables measures. We will also consider projects with longer payback periods where Energy Managers and their finance colleagues put a case for ambitious, realisable emission savings.