

ECO-ACTIVE

ENERGY EFFICIENCY SERVICE

Phase 1 Executive Summary

An overview of the work completed by
the Energy Efficiency Service from
January 2009 – January 2011



States
of Jersey


Jersey Electricity

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Foreword

Sir Nigel Broomfield: Chairman of the Jersey Energy Trust

I have had the pleasure of Chairing the Jersey Energy Trust since 2009. It has been an eventful two years. From a standing start, the ECO-ACTIVE Energy Efficiency Service (EES) has delivered a new innovative local service that combines social and environmental benefits. I believe that the States of Jersey and Jersey Electricity plc have shown considerable foresight in approving this important area of work and I am grateful to Jersey Electricity who provided the seed funding that was instrumental in initiating the programme.

Using less energy is the highest priority if we are to achieve the goal of secure, affordable and sustainable energy provision. Reducing energy use means fewer emissions and this is essential if, by 2050, Jersey is to succeed in lowering its carbon emission by 80% compared to 1990 levels in line with our obligations under the Kyoto Protocol.

Although these global objectives are important, we must not lose sight of the very real local benefits of this programme. Vulnerable members of our community are receiving property upgrades that will raise their standard of living and levels of comfort, as well saving them money by reducing their bills. Alongside this is the stimulus to the local economy where jobs in this sector have been secured or created as a result of the volume of work commissioned by the EES.

The first 2 years of the Home Energy Scheme have delivered impressive results. Over the lifetime of the interventions fitted in the scheme's first 2 years 60 million kWh of energy will be saved and 13,500 tones of carbon dioxide emissions will be avoided. There will also be a saving of £4 million in energy bills. This means that for every pound paid out by the programme there is a saving of £5.40 for the consumer.

Although hundreds of vulnerable people have already been helped by the EES, there is much still to do. Our programme continues to help those in our target group who have yet to apply as well as new entrants. It has also extended help to other socio-economically vulnerable groups.

In 2011 the programme was expanded to include those on the Food Costs Bonus Scheme and we are about to invite applications from the Vulnerable Over 70s. The types of interventions that

the scheme can offer were also widened to create a more comprehensive service. Our aim is to deliver help as rapidly as possible without compromising our commitment to high standards of workmanship and customer care.

Another important area of activity has been to provide general energy efficiency advice to the wider public. The programme is now endorsed by the leading UK organisation in this area, the Energy Saving Trust. This autumn we will be publishing an online aerial heat loss map which will give people information about thermal losses from their property and advice on how they can improve the thermal efficiency of their homes or businesses.

The long term future of the Service is promising. Even more progress could be made if it were extended to the able-to-pay sector. Whilst this group needs less financial subsidy, partial grants and education programmes could encourage people to reduce the amount of energy they use..

I and my colleagues on the Energy Trust together with our colleagues in the Energy Efficiency Service will continue to look for cost effective ways of helping to reduce energy consumption and to use energy more efficiently in Jersey. We see that both as a benefit to the individuals concerned but also to the environment which we prize so highly.

Sir Nigel Broomfield

Chairman of the Jersey Energy Trust

July 2011

What is the Energy Efficiency Service?

The Energy Efficiency Service (EES) was officially launched by the Minister for Planning and Environment in April of 2009. It is funded by an annual budget of £1 million from the States of Jersey, as well as a generous seed donation of £500,000 from the Jersey Electricity Company. The scheme provides grant funded energy efficiency improvement measures to socio-economically vulnerable Islanders.



The Minister and Assistant Minister for the Environment, JET Board members and scheme contractors meet recipients of the Energy Efficiency Service Community Buildings Programme in 2009.

The work of the EES is overseen by the Jersey Energy Trust (JET). The JET board provides a key advisory function to the Minister for Planning and Environment on the development of the EES's work programme. Together with the senior management team of the Department of Environment, the JET board provides leadership, independence and oversight on the corporate governance of the EES. The Jersey Energy Trust board is chaired by Sir Nigel Broomfield and comprises individuals from the energy and social sectors locally and Andrea Cook OBE, who also sits on the board of the Energy Saving Trust in the UK.

Based within the Department of Environment at Howard Davis Farm, the team is composed of two full time employees who report to the Director for Environmental Policy. In addition specific areas of technical support are provided by a local energy consultancy.

What does the Energy Efficiency Service provide?

The EES has developed two schemes during its initial Phase – the *Home Energy Scheme* and the *Community Buildings Programme*. They are both entirely new concepts for the Island and have been well received by the respective target audiences. This report concentrates on the Home Energy Scheme.

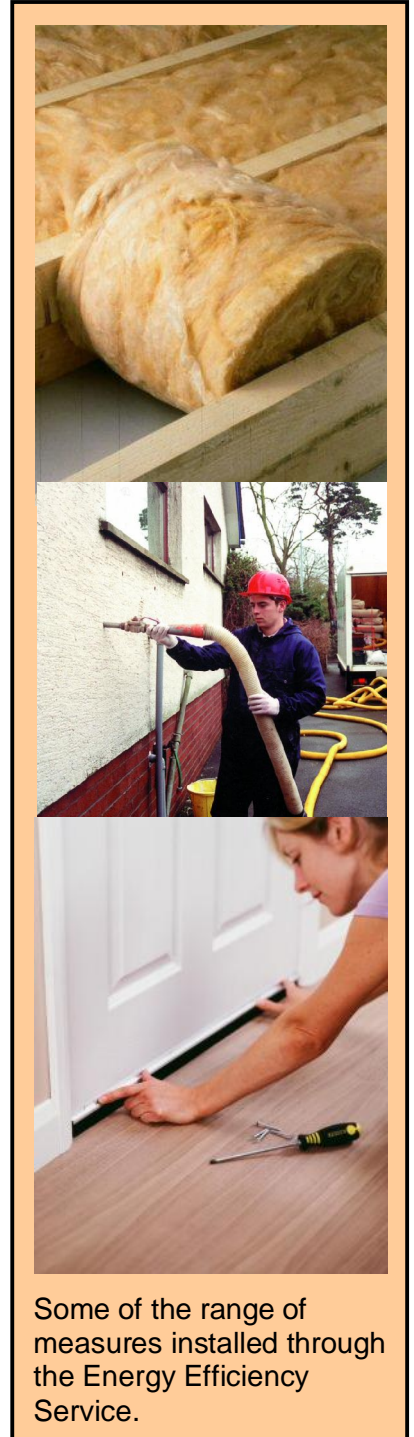
The Home Energy Scheme

The first scheme launched by the EES was the *Home Energy Scheme* which provides a wide range of energy efficiency improvements to socioeconomically vulnerable private households. Given the vulnerable nature of the scheme's recipients, the EES operates a turnkey service in order to minimize the disturbance and disruption that are inevitable when carrying out works in a private home. Applicants are kept up to date through regular written and telephone communications as well as site visits if required.

All works are organised and paid for by EES staff through a selection of approved local contractors. Funding for the scheme began in January 2009 and after the initial development work, two full time staff were appointed by April 2009. The service was delighted to carry out its first energy efficiency works in June 2009. Works that qualify for 100% grant funding through the scheme include:

- Loft insulation
- Cavity wall insulation
- Hot water tank and pipe insulation
- Heating controls
- Draft proofing
- Low energy lamps
- Energy advice and information

In September 2010 the *Heating System Improvement* initiative was introduced as an addition to the basic Home Energy Scheme measures listed above. Designed to improve the efficiency of heating systems by a minimum of 15% the scheme is only open to owner occupiers with heating systems over 10 years old. Given the timing of the initiative's introduction this work program is first revisiting existing applicants, as well as being available to new entrants.



Energy Efficiency Service Key Stats

£772,548 spent on energy efficiency improvements through the Home Energy Scheme

£1,150 average spend per Home Energy Scheme property

3,664 individual measures installed!

2,008MWh of energy saved per annum through measures installed in Phase 1 – that's enough energy to boil around 10 million full kettles!

£160,449 expected reduction in energy bills per annum

430 tonnes of carbon dioxide saved per year – that's the equivalent of around 4300 return flights from Jersey to London!

£133,785 spent on heating system improvements

Energy efficiency projects are underway within **21 charities and not for profit organisations**

570 individuals assisted through **the Community Buildings Programme**

For a full breakdown of energy, cost and carbon savings as well as methodology please refer to the EES Phase 1 Statistics Report.

To date **735 private homes** have received assistance through the Home Energy Scheme. Measures installed to date by the EES are expected to save over 13,500 tonnes of carbon dioxide over their lifetime. Per property these measures contribute to average savings of approximately £239 a year on each of our low income applicant's energy bills. The EES is an important delivery mechanism in terms of the Island's energy security and sustainability strategy and this is demonstrated by the expected annual saving of over 2,000MWh of energy through measures installed to date.

The Community Buildings Programme

In 2010 a second EES work programme was introduced. The *Community Buildings Programme* provides funding for energy efficiency improvements to charities and not-for-profit organizations that provide a service within the local community to our socio-economically vulnerable target group. The measures received by qualifying organizations are similar to those provided in the Home Energy Scheme. To date 21 charities and not-for-profit organisations that provide assistance to over 570 individuals are receiving assistance through the programme. These include:

- *Little Sisters of the Poor*: Independent living apartments, residential and nursing care for over 90 elderly individuals with low income.
 - Loft and cavity wall insulation provided. Heating review underway.
- *Jersey Council on Alcoholism*: Provides half way accommodation for up to 11 adults in recovery from alcohol addiction issues.
 - Loft insulation, draught proofing and low energy lamps provided. Boiler replacement and heating system improvement underway.

- *Les Amis Incorporated:* Offers care and support to adults with learning difficulties in several residential properties.
 - Loft insulation provided to six properties to date. Heating reviews underway.
- *St Ouens Parish Accomodation:* Sheltered housing for 49 elderly parish residents.
 - Loft and cavity wall insulation. Boiler replacement and heating controls improvement in progress.

Setting the standards

The Energy Efficiency Service process does not finish when the works at a property are complete. We pride ourselves on the service we provide to our clients and a quality assurance process is carried out on works at a sample of properties to ensure our works meet necessary standards. All contractors working for the scheme undergo a competitive tender process including checks on qualifications and security to ensure their suitability for our work. Applicants are also invited to complete our feedback process and, if they wish, allow us to access and review their energy bills. The vast majority of our applicants leave positive comments with nearly 97% of respondents rating the EES process as a whole as either good or very good!

The EES has recently undergone an endorsement and verification process by the Energy Saving Trust (EST), the UK's leading impartial organization helping people save energy and reduce carbon emissions. This ensures that all advice provided by the service is delivered by endorsed staff, who have been trained to deliver best practice standard energy saving advice. All facts and figures in consumer facing EES documents are checked by the EST prior to publication; the carbon dioxide and financial savings in this report have been checked and verified by EST using their Jersey specific data.





Cavity wall insulation being carried out in St Brelade.



A freshly insulated section of loft in St Saviour.



An Energy Efficiency Service contractor installs a new smoke alarm.

How have we done?

At the outset of the Energy Efficiency Service a range of Key Performance Indicators (KPIs) were identified. Of the four indicators that have been assessed¹, the EES is meeting or exceeding its requirements in all instances:

- KPI: Deliver 15% reduction in energy use
 - **Achieved:** Average per property saving of 2,989kWh per year equating to 16.9% of average domestic consumption.

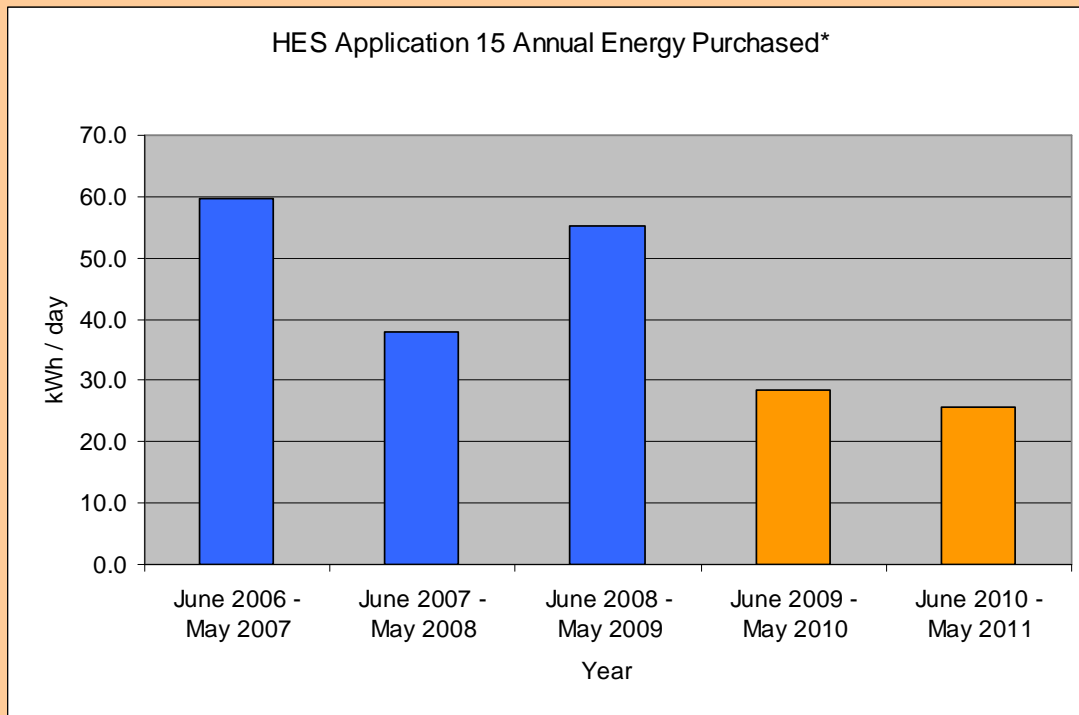
- KPI: Household energy saving of £70 to £250
 - **Achieved:** Average per property bill reduction of £239.

- KPI: Reduce greenhouse gas emissions (CO₂) by 15%
 - **Achieved:** Average per property reduction of 639kg per year equal to 16.1% drop in applicant's 'carbon footprint'

- KPI: Provide improvement to end use of heating energy to at least 800 households
 - HES measures implemented within 735 households as well as 570 individuals through the Community Buildings Programme

¹ The 'improvement in SAP rating' KPI has not been possible to assess.

Case Study: 1950's detached bungalow



Home Energy Scheme Applicant # 15

Owner occupier from St Brelade living in a 1950's detached bungalow with an oil fired wet central heating system.

Works carried out:

- 99 square metres of 200mm thick 'top up' loft insulation
- Loft clearance to facilitate works
- 118 square metres of cavity wall insulation
- Low energy lamp replacements
- Replacement oil fired boiler

Insulation works were completed in December of 2009 with the boiler replacement carried out in December of 2010.

Applicant's feedback comments

"Compliments to all concerned. Very pleased with all that has been done. My bungalow is much warmer. I even turn the stat down. Once again many thanks much appreciated".

* - In contrast to the electricity and gas consumption oil is presented as kWh *purchased* (rather than consumed) *per year* (rather than per quarter) due to the fact that oil purchases are carried out 'in bulk' and quantities purchased during one period can be used in the following period in some instances.



What next?

Beyond these landmarks, the EES has been continually looking to expand its remit and assist in energy awareness and reduction wherever possible. For instance, through attending public events the EES team aims to increase awareness of the assistance available to vulnerable members of the community, as well as providing energy saving advice to the general public.

Through 2011 and into 2012 this type of information provision will be expanded through an energy efficiency advice line open to the general public, an online aerial thermal image showing property heat loss as well as assistance to schools hoping to decrease their energy consumption.

In the long term even greater progress can be made if the Service could be extended into the able-to-pay sector where partial grants and education programmes can help and encourage people to take action on improving their energy efficiency. The forthcoming Energy White Paper is expected to recommend this route as the most cost effective way of achieving the Island's long-term energy reduction targets.

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This project is a States of Jersey initiative started with a £0.5m donation from Jersey Electricity