

Application for European Structural Funds

Please review this Application form, sign and date the declaration on the final page and return the Application form to;

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Application Information

Title	Low Carbon Shetland - Energy Efficiency in Social Housing
Reference	H&I/ERDF/2010/5/3/0052
Version Number	1
Status	Stage 2 Submitted
Organisation	Shetland Islands Council
Programme	H&I (HIPP) - European Regional Development Fund
Fund Name	Convergence
IAB	HIPP
Area	Highlands and Islands Scotland
Application Type	European Regional Development Fund
Priority	Priority 3: Enhancing Peripheral and Fragile Communities
Expenditure Type	Capital
Project Contact	Sally Spence, 01595 744915, sally.spence@shetland.gov.uk

Part 1: Project Summary Statement

Project Contacts

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Project Timescale

Physical start date	18 Oct 2011
Physical end date	31 Dec 2013
Financial end date	30 Jun 2014
Contract Let Date	01 Oct 2011

Project location - Eligible

Argyll Islands ☐

West Cowal and Dunoon ☐

Kintyre ☐

Oban and Mid-Argyll ☐

Lewis & Harris ☐

Southern Isles ☐

Badenoch & Strathspey ☐

Caithness ☐

Easter-Ross ☐

Inverness & Nairn ☐

Lochaber ☐

Skye & Lochalsh ☐

Sutherland ☐

Wester-Ross ☐

Moray ☐

Isle of Arran ☐

Cumbraes ☐

Orkney Mainland ☐

Orkney Islands ☐

Shetland Mainland ☐

Shetland Islands ☐

Other Structural Funds Applications

Similar project seeking ☐
funding in another Structural
Funds Programme area

Project flexibility and duration

Application to use up to 10% ☐
Geographical Flexibility ?

Application to use up to 10% ☐
Fund Flexibility

Application to use up to 10% ☐
Trans-national funding
flexibility

Project description

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Project Overview

This application under ERDF Priority 3 forms a key part of an overarching project – Low Carbon Shetland – which aims to move Shetland towards a low carbon economy by 2014. The aspiration of the project is to enable the Shetland Islands to be powered solely by renewable energy for one hour by 2014 by bringing 10MW of new renewable energy onto the Shetland grid.

The aim of this Priority 3 project is to install 750 homes with a new and innovative storage heating and water heating system which will provide a more efficient and controllable heating solution, enabling more renewable connections to the grid.

This Priority 3 application is complemented by a Priority 1 application and also an application to Ofgem's Low Carbon Network Fund. The fund shall allow Distribution Network Operators (DNOs) to try out new technology, operating and commercial arrangements. The objective is to help all DNOs

understand what they need to do to provide security of supply at value for money as the UK moves to a low carbon economy.

At present the electricity grid in Shetland is constrained preventing any further renewable energy supplies from receiving a connection. The Low Carbon Shetland project aims to build capacity in the grid for renewable connections through several novel demand side management techniques. These techniques will include controlling demand through electricity storage – in the form of heat – which will assist in shifting and therefore flattening the demand profile. Through the use of innovative communications technology this will in turn facilitate more renewables connections to the grid.

This project is seen as the foundation from which to progress towards a carbon neutral Shetland and enable the Shetland community to benefit from the world class natural resources on its doorstep. The overall aim is to provide the local population with efficient and affordable heating which will help combat fuel poverty, make local businesses more sustainable and attract business development from organisations that would be keen to be associated with a renewable energy source.

There are elements of the Low Carbon Shetland project which do not form part of the ERDF bids and are being funded separately. These are:

- A 6.9MW wind farm
- Smarter grid control mechanisms
- Customer connections to the Lerwick District Heating Scheme
- Electric vehicles
- Community wind farms

The storage heaters and hot water tanks are a key component of this multi- faceted project and are seen as critical in being able demonstrate the overall success.

Partnership

To resolve current restrictions and implement solutions, key partners in Shetland have come together. These include: Shetlands Islands Council, Scottish Hydro Electric Power Distribution, Shetland Heat Energy and Power, Hjaltsland Housing Association, and Highlands and Islands Enterprise.

Project Description

The elements of the Low Carbon Shetland project which relate to this Priority 3 application for ERDF funding are:

(1) The introduction and installation of new generation, high-tech energy efficient household heating systems with interactive storage that can store heat in a much more sustainable manner. The new storage heaters and immersion heaters will be controlled by Active Network Management systems providing Demand Side Management. This smart grid solution will give customers access to new charging and incentive regimes to reduce overall energy costs further. It will also make optimum use of renewable generation and allow grid stability to be managed more effectively.

750 social houses are targeted for conversion at a cost of £3,850 per house. Prototypes for the tanks and heaters are currently being developed with an estimated completion date of January 2011. Installation in the first houses which will pilot the new systems will start in February 2011 and the conversion programme will take place over 3 years.

The project will provide homes with a new and innovative concept in storage heating, which will be highly insulated and designed to store heat, only releasing it when required to maintain the temperature at an optimum comfort level. This will provide a more efficient heating system with the potential to reduce costs.

(2) Support for a drop-in energy advice and information centre to promote the concept of the smarter grid in Shetland. The conversion programme will be supported by a community energy information centre open to the general public. This will provide advice and interactive displays on the innovative heating systems and raise awareness of energy efficiency. Funding is sought towards premises rental costs and a funded full-time post for a 3-year period.

Strategic Fit

This application is wholly consistent with the objectives of ERDF Priority 3 which aims to enhance the sustainable growth of peripheral and fragile communities. The installation of energy efficient heating systems in social housing throughout Shetland promotes a more sustainable solution to local problems and will help reduce fuel poverty with 750 householders directly benefiting from reduced energy costs.

This project will also make a contribution to Scottish Government renewable energy targets and will make a strong contribution to the objectives of the Shetland Renewable Energy Strategy.

Project Outputs

The project will:

- Deliver two energy efficient systems to 750 houses through the installation of a revolutionary design of storage heaters and water heaters, enabling 5MW of renewable energy connection to the grid. Overall, this will result in a carbon reduction of 4,000 tonnes per annum.
- Create one new full-time post employed within the energy advice and information centre.
- Make a significant impact on reducing fuel poverty in Shetland.
- Produce new knowledge that can be shared and disseminated to communities in the UK and across Europe.

Project Sector

Indicate the best fit Project Sector or Economic Activity Dimension

Activities linked to the environment

Project Theme

Indicate the best fit Project Theme Dimension

Renewable energy: hydroelectric, geothermal and other

*Part 2: Participation Characteristics (European Social Fund only)**Part 3: Core Indicators and Targets***Indicators and Targets**

Type	Indicator	Project Target
Output	Number of e-learning/childcare and other community facilities supported.	0
Output	Area of business space created or modified (m2).	0
Output	Number of transport projects supported.	0
Output	Number of ICT infrastructure projects supported.	0
Output	Number of renewable energy projects supported.	1
Result	Number of gross jobs created.	1

*Part 4: Justification***4.1 Strategic Fit****Project Overview**

This application under ERDF Priority 3 forms a key part of an overarching project – Low Carbon Shetland – which aims to move Shetland towards a low carbon economy by 2014. The aspiration of the overarching project is to enable the Shetland Islands to be powered solely by renewable energy for one hour by 2014 by bringing 10MW of new renewable energy onto the Shetland grid.

The aim of this Priority 3 project is to install 750 homes with a new and innovative storage heating and water heating system which will provide a more efficient and controllable heating solution, enabling more renewable connections to the grid.

This Priority 3 application is complemented by a Priority 1 application and also an application to Ofgem's Low Carbon Network Fund.

At present the Shetland grid is constrained preventing any further renewable energy supplies from receiving a connection. The Low Carbon Shetland project aims to build capacity in the grid for renewable connections through several novel demand side management techniques.

These techniques will include controlling demand through the use of storing electricity in the form of heat which will assist in shifting and therefore flattening the demand profile. This will in turn facilitate more renewables to connect to the grid.

Controlling the demand will be managed through innovative communications technology linking storage heating to the grid

ERDF Priority 3 focuses on enhancing the sustainable growth of fragile and peripheral areas within the Highlands & Islands. This project fits within the overall vision of the ERDF programme of promoting prosperous, inclusive and self-sustaining communities and will achieve energy efficiency in social housing.

The project aims to install the new heating systems into 750 houses throughout Shetland. This is a combination of Shetland Islands Council and Hjaltland Housing Association social housing stock. The housing earmarked for conversion is located throughout Shetland: 601 houses on the mainland of Shetland, and 149 houses on 5 islands (see Appendices 1 & 2). The benefits of this project will be spread out to some of the most remote and fragile areas of Shetland.

The provision of more energy efficient social housing, particularly in the more rural areas, will address community sustainability which is identified as a key challenge for the **H&I's ERDF Convergence Programme 2007-2013**. The renewable energy sector is identified as a key economic sector for growth within the H&I's and the focus of this application is on using renewable energy to reduce household energy costs. The ERDF Programme is also committed to supporting projects, like this one, which support environmental sustainability and provide greater application of renewables technologies. This application is seeking funding for improving energy efficiency in social housing throughout Shetland using a new and innovative style of heating. Funding is also being sought for an energy information centre which will provide information, advice and interactive displays on the new heating systems and its benefits and energy efficiency generally to social housing tenants and the general public. This project will therefore strongly contribute towards environmental sustainability and the overall sustainable development objective of the Programme.

Highlands & Islands Enterprise (HIE) are tasked with building sustainable economic growth in H&I's region and in their **Operating Plan 2008-2011** energy is identified as a key growth sector in the H&I's, specifically exploiting the potential of renewable energy sources. HIE prioritises support to those areas designated as fragile. Almost a quarter of the social houses targeted for improvement under this project are located in areas designated as fragile by HIE. Highlands and Islands Enterprise, while not a partner in the Priority 3 project, are involved from a perspective of supporting the energy sectors, particularly renewable energy. Two of their high level priorities are to maximise opportunities in the renewable energy sectors and work towards a low carbon economy.

At **EU level**, the **Europe 2020 Strategy** sets out a vision for the EU to become a smart, sustainable and inclusive economy. Developing an economy based on knowledge and innovation and promoting a more resource efficient, greener and competitive economy are considered to be among the priorities to achieve this vision. This project fits into the above strategy since it is a very innovative project promoting the use of green energy.

At **national level**, the project fits in well with the **Scottish Government Economic Strategy**. The energy sector, in particular renewables, is highlighted as a key sector with high growth potential. This project can make a direct contribution to the Government's Greener Strategic Objective: "Improve Scotland's natural and built environment and the sustainable use and enjoyment of it".

At **local level**, the project contributes well to the **Shetland Renewable Energy Strategy** which was

adopted in 2009. The strategy was drawn up in consultation with both the public and private sector. The Shetland Renewable Energy Forum is responsible for delivering the Strategy and both the Council and Hjaltdland Housing Association are members of the Forum. This project can contribute directly or indirectly to all of the Objectives of the Strategy:

Objective 1: *Develop economic and effective solutions which significantly reduce the volume of non-renewable fossil fuels required to power Shetland.* The priorities for this Objective are to encourage the adoption of energy efficient practices and replace consumption of non-renewable fossil fuels with energy from renewable sources, with a focus on encouraging innovative practices. The focus of this project is on using renewable energy in a new, innovative style of household heating to improve energy efficiency.

Objective 2: *Create employment, income and new skills in Shetland by stimulating new economic activity linked to the presence of renewable energy resources in the islands.* This project will increase demand on installers of renewable technologies and in the longer term could create new employment opportunities locally as the benefits of energy efficient heating systems are recognised.

Objective 3: *Ensure there are direct benefits, in addition to employment, income and new skills, to the community from renewable energy development in Shetland.* The project will provide long-term economic and social benefits for the Shetland community – for example, protecting individuals from future rises in fossil fuels and reducing the number of householders in Shetland who are currently in fuel poverty.

Objective 4: *Enable peripheral communities to use renewable energy as a way to enhance the viability of the community and community facilities.* The new heating systems will be installed in housing the length and breadth of Shetland. The provision of more energy efficient social housing will improve the sustainability of remote communities. Renewable energy offers the potential for new economic activity in areas where there are limited opportunities for economic diversification and could therefore create employment opportunities in peripheral locations.

Objective 5: *Stimulate awareness of the importance of renewable energy and the need to reduce carbon emissions; and develop skills in energy efficiency and renewable energy alternatives.* The project will promote the benefits of heating homes using energy from renewable sources. The energy advice and information centre will be open to the general public and will help raise awareness of using renewable energy to reduce costs. Shetland College have developed courses targeted at training the local workforce in the installation of domestic micro-renewables in order to meet increasing demand for skills in this sector.

The **Shetland Single Outcome Agreement for 2010/2011** commits the Council and its partner agencies to working together to address local needs. The project will contribute towards the following Outcomes:

National Priority Area: Wealthier and Fairer

Enable businesses and people to increase their wealth and more people to share fairly in that wealth

Shetland Wealthier and Fairer Strategic Outcome:

F.1 Reduced level and impact of poverty, deprivation and social exclusion in Shetland.

Indicator: F.1.3 Number of Households in Fuel Poverty

Target: Decrease number of households in fuel poverty: national target or so far as is reasonably practicable, people are not living in fuel poverty in Scotland, by November 2016.

Data from the Scottish House Condition Survey – Local Authority Report 2005-08 indicates that 33% of households in Shetland were in fuel poverty and 11% were in extreme fuel poverty compared with a Scotland average of 25% and 7% respectively.

National Priority Area: Greener

• Improve Scotland's natural and built environment and the sustainable use and enjoyment of it.

Shetland Greener Outcome:

G.1 We will move towards sustainable and efficient consumption and production.

Indicator: G.1.2 Carbon reduction of individuals

Target: Reduce

Indicator: G.1.3 Carbon reduction of communities

Target: Reduce

4.2 Evidence of Demand

Social housing has been targeted as benefiting from the new heating systems given the relatively higher percentage of those residents in fuel poverty. Shetland on average is the coldest place in the whole of the UK. It has the longest 'heating season' (ie the number of days when the outside temperature is below 15.5°C and heating is required). Data from the Scottish House Condition Surveys (SHCS) indicates that between 2005 and 2008 33% of households in Shetland were in fuel poverty and 11% were in extreme fuel poverty compared with a Scotland average of 25% and 7% respectively. The cost of fuel has increased since the last SHCS and due to a heavy reliance on electric and oil (as there is no mains gas in Shetland) the impact has been felt more heavily in Shetland. The population is an ageing population, which means that there is a larger proportion of the community relying on pensions, state pensions and benefits. Benefits are not increasing at a rate that matches the increase in household costs.

Given the levels of fuel poverty in Shetland, it is becoming increasingly important for householders to be able to understand and access the benefits of alternative heating systems which will give reduced energy bills. Part of this project includes the establishment of an energy advice and information centre which will enable information on the new heating system to be widely disseminated to the general public thus raising awareness of the benefits of using renewable energy to reduce household energy costs.

Evidence shows that Shetland has the most productive wind regime in the UK which enables wind turbines to be more productive in Shetland than anywhere else. The overall aim of the Low Carbon Shetland project is to make use of this natural resource and store energy (in the form of heat) when the 'wind is blowing'.

4.3 Need for Grant

ERDF grant will allow the project to proceed allowing a considerable number of social housing tenants to benefit from reduced energy costs. Due to the number of social houses (750) identified for this new generation heating system, this is a three-year project starting in January 2011. As well as reducing fuel poverty, the project will make a significant contribution to increasing the share of energy from renewable sources. It is estimated that it will facilitate 4,000 tonnes of CO₂ reduction per annum.

Cold winters and the high cost of energy in Shetland mean that it can be very costly for householders to adequately heat their homes during the winter months, particularly those on reduced incomes. Shetland has one of the highest levels of fuel poverty in Scotland. Historically, social housing tenants are those on lower incomes and who are most affected by fuel poverty. Both the Council and Hjaltsland Housing Association believe in using systems which will reduce the running costs of their properties as far as is reasonably practicable.

Initially 750 social houses throughout Shetland have been targeted for the replacement of the new generation storage heaters and hot water tanks. It is estimated that the cost for replacement conversation will be £3,850 per house. The cost, including installation, is for one tank, two or three heaters per house, and the heating control mechanism.

A significant number of houses in the social housing stock are in fuel poverty and are in the 'hard to treat' category with solid walls which means that they cannot be improved within existing Government grants.

This project is a key part of an overarching project – Low Carbon Shetland – which aims to move Shetland towards a low carbon economy and, by 2014, for Shetland to be powered solely by renewable energy for one hour by bringing 10MW of new renewable energy onto the Shetland grid.

4.4 Structure and Management

The project will be managed jointly through a project board which will include partner representation from Scottish Hydro Electric Power Distribution, the Council, Hjaltsland Housing Association, Shetland Heat Energy and Power, and HIE. This group will oversee project development and implementation with focus working groups set up to implement and report to the project board on specific elements.

The proposed timetable for the project is as follows:

Phase

Start

Completion

Phase 1

Develop prototypes for tanks and heaters	Underway	January 2011
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Phase 2

Factory commissioning for production of tanks and heaters	January 2011	Ongoing
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Phase 3

Pilot scheme in 6 houses	February 2011	August 2011
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Phase 4

Roll out full scheme	October 2011	December 2013
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Phase 3 of the project will be demonstrating the new system in 6 houses for a period of 6 months and allow for a period to make any necessary modifications before the full conversion programme is rolled out. Following the pilot, the conversion programme will start in October 2011.

No planning permission is required for the project.

It is proposed to tender the works for installing the improved storage systems in each house. According to EU Public Procurement rules, advertising in the EU's Official Journal will not be required since the project is under the £3.6 million threshold for works. As this is an evolutionary system using new technology which is not currently available on the market, Dimplex will be the nominated supplier given that they are the only supplier developing this innovative product and that have the necessary technology and agreements on working with Scottish & Southern Energy communications systems.

Both the Council and Hjaltland Housing Association have significant experience in managing housing projects. In 2009, Hjaltland completed their 500th new build property in Shetland and currently manage over 500 houses for rent or shared ownership, which includes general needs, sheltered and amenity, and other special needs housing.

Shetland Islands Council currently manages 1,800 properties for general needs tenants as well as sheltered schemes for the elderly. The Council has ongoing experience in delivering quality programmes including, planned maintenance and new build schemes. Through regular stock condition surveys, the Council is able to deliver relevant, annual programmes of replacement and refurbishment works, to ensure that the housing stock is maintained to a high standard. The Council is currently embarking on a new build programme of an additional 100 properties.

Both organisations have considerable experience in managing projects funded from external sources and have appropriate financial management and control systems in place. Hjaltland, through their One-Stop-Shop, act as agents for the Scottish Government Rural Home Ownership Grants for first-time builders, and for the Shetland Islands Council providing assistance for repairs, improvements and adaptations.

This application is also seeking funding towards the establishment of an energy advice and information centre and a funded post which will provide information on the new heating systems and enable social housing residents to use them effectively and maximise the benefits from them. It will be the role of the employed post to monitor, evaluate and report on the impacts of the new style heating system. The employee will be located in the Shetland One-Stop-Shop at Hjaltland Housing Association. The One-Stop-Shop advises and supports households to improve, maintain, and adapt their properties. The One-Stop-Shop manages the delivery of the Council's fuel poverty grants. Co-locating this person alongside the One-Stop-Shop will assist the concept of providing a single point of contact for energy advice. The centre will also be open to the general public and it is the intention to widely disseminate performance data which will help raise awareness of the opportunities to benefit from renewable energy and reduce household heating costs.

4.5 Partnership

The overall Low Carbon Shetland project is a partnership between Shetland Islands Council, Scottish Hydro Electric Power Distribution, Shetland Heat Energy and Power, Hjaltland Housing Association and Highlands and Islands Enterprise. This Priority 3 application is made in parallel to an application for Priority 1 funding for the other element of the Low Carbon Shetland project.

Partners in the Priority 3 project are the Council, Hjaltsland Housing Association, and Scottish Hydro Electric Power Distribution.

Highlands and Islands Enterprise, while not a partner in the Priority 3 project, are involved from a perspective of supporting the energy sectors, particularly renewable energy. Two of their high level priorities are to maximise opportunities in the renewable energy sectors and work towards a low carbon economy.

The Council and Hjaltsland work in partnership to ensure that housing is available in all parts of Shetland.

Scottish Hydro Electric Power Distribution (SHEPD) owns and operates the electrical distribution network in northern Scotland. The industry regulator Ofgem have established a £500m Low Carbon Network Fund (LCN) to encourage the use of new technologies, operating and commercial arrangements. SHEPD have identified that Shetland is an ideal location for its bid to secure funds from the LCN fund to upgrade and develop the existing electrical network to allow the connection of the additional wind generation and the new generation of heating systems. SHEPD via the LCN fund will upgrade the electrical network to facilitate the connection of the new wind generation and heating systems.

4.6 Horizontal Themes

Environmental sustainability:

Both the Council and Hjaltsland Housing Association are committed to finding alternative heating solutions for homes which are not only user friendly, but will help combat fuel poverty and decrease energy costs to the householder, and thereby reducing dependence on fossil fuels.

Resource efficiency

The project will provide homes with a new and innovative concept in storage heating, which will be highly insulated and designed to store heat, only releasing it when required to maintain the temperature set by householder for the room. It is anticipated that this will overcome a common problem associated with existing storage heating whereby householders currently have to open windows to cool the house as current storage heaters are designed to continuously release heat, and variable weather from one day to the next means it is difficult to achieve a comfortable temperature within the house. In addition the unique controllers in the storage heaters and hot water tanks allow the electricity network to utilise smart grid technology to help stabilise the network allowing the addition of 5MW of renewable energy onto the Shetland grid which is not currently able to connect.

This has the effect of:

- Reducing the energy consumption in the home by providing a more efficient and controllable storage heater solution;
- More than doubling the current renewable electricity connected to the Shetland grid;
- A reduction in the amount of fossil fuel imported and utilised for electricity production in Shetland;
- Utilisation of Shetland's natural renewable energy resource;
- Demonstrating the use of smart grid technology towards the long term aim of 100% renewable power on the Shetland Grid; and
- Demonstrating the use of smart grid technology allowing increased renewables on the National grid and maximise utilisation of Scotland's natural renewable resources.

Environmental Impact

The project seeks to remove the current restriction on further renewable energy being connected to the Shetland grid. In doing so we will allow Shetland's natural resources for renewable energy to be utilised, reducing our dependence on imported fossil fuel and the carbon and pollution associated with it, and move us towards a more sustainable future in terms of local energy production on the Islands.

Local Sourcing

Shetland has an abundance of natural renewable energy resources, however as we are not connected to the National grid we are limited by the local grid's capacity to take further renewable energy and no further connections are currently allowed. As such, community initiatives to develop wind to heat and power schemes cannot proceed without this project. Renewable energy is seen as an essential aspect of economic diversification in Shetland, and it is essential that the combination of smart grid technology and the innovative use of heat storage and distribution systems progress for the local community to benefit from the natural renewable resources on our doorstep.

Equal opportunities:

The proposed project will open up access for individuals the length and breadth of Shetland to take advantage of the benefits of renewable energy and access cheaper household energy costs.

The project also brings the opportunity to alleviate fuel poverty in Shetland. Social housing has been targeted as benefiting from this new style of heating due to the relatively high percentages of those residents in fuel poverty. Data from the Scottish House Condition Surveys indicates that between 2005-2008, 33% of households in Shetland were in fuel poverty. This is estimated to be double the Scottish average.

The Shetland Single Outcome Agreement for 2010/11 contains a Commitment to Promoting Equality (Paragraph 3.1) from all the Community Planning Partners, which includes the Council and Hjaltdland Housing Association, which is embedded in their service delivery. Throughout each of the 6 National Strategic Themes, there are local outcomes that seek to promote equality of opportunity across the whole population of Shetland, with indicators developed to monitor progress. Both the Council and Hjaltdland Housing operate to the strictest rules in relation to ensuring all those in need have the opportunity to access their homes.

Overall the project will remove the barrier which currently exists on further renewable energy being connected to the Shetland grid and allow the Shetland community to access the benefits of renewable energy.

Social inclusion

The project will make a direct impact on promoting social inclusion in Shetland. By providing access to fairer energy costs to social housing residents, the project will benefit a large proportion of those who have been identified as being in fuel poverty. This will have the long-term impact of increasing individuals' prosperity and wealth and ultimately helping to sustain communities. According to Priority 3, the social and economic sustainability of peripheral and fragile areas is a critical component of regional competitiveness. This was recognised by the Lisbon Council in 2000 which acknowledged the scale of poverty and social exclusion in certain areas was a major constraint on the EU achieving its competitiveness aims.

4.7 Outputs, Results, Impacts, Evaluation**Direct Outputs & Results**

The project will:

- Deliver two energy efficient systems to 750 houses through the installation of a revolutionary design of storage heaters and water heaters, enabling 5MW of renewable energy connection to the grid. Overall, this will result in a carbon reduction of 4,000 tonnes per annum.
- Create one new full-time post employed within the energy advice and information centre.
- Make a significant impact on reducing fuel poverty in Shetland.
- Produce new knowledge that can be shared and disseminated to communities in the UK and across Europe.

The social housing targeted for the energy efficiency improvements is spread throughout Shetland many of which are located in fragile areas. Priority 3 recognises the importance of the sustainability of peripheral and fragile areas in the H&I's region.

Longer Term Outputs and Impacts

Statistics have shown the high level of fuel poverty in Shetland, particularly those in social housing. Currently, householders are faced with fluctuating fuel prices making it difficult to budget for the cost of heating. Allied to this is the problem associated with existing storage heaters which are designed to continuously release heat and with variable weather from day to day, this makes it is difficult to achieve a comfortable temperature within a house. This project therefore aims to eradicate fuel poverty in social housing and provide long-term energy security.

The energy advice and information centre will play an important role in disseminating information about

the benefits of energy efficient heating systems to the wider public and help raise awareness of the importance in using renewable energy as an alternative energy supply to reduce dependence on fossil fuel.

Overall, the Low Carbon Shetland project seeks to remove the current restriction on further renewable energy being connected to the Shetland grid by allowing Shetland's natural resources for renewable energy to be utilised. This will reduce our dependence on imported fossil fuel and the carbon and pollution associated with it, and move us towards a more sustainable future in terms of local energy production on the Islands. The ultimate goal is for Shetland to be powered solely by renewable energy for one hour by 2014. It has been estimated that this project will reduce Shetland's carbon footprint by around 4,000 tonnes per annum.

Renewable energy is also seen as an essential economic diversification within Shetland. Shetland College have developed courses targeted at training the local workforce in the installation of domestic micro-renewables in order to meet increasing demand for skills in this sector.

Being able to access renewable energy to reduce heating costs will improve the attractiveness of living in rural communities and therefore improve the sustainability of fragile areas.

Monitoring & Evaluation

Through the work of the employed post within the energy advice and information centre, information will be collated and widely disseminated on the benefits of the energy efficient heating systems.

Partners in the Low Carbon Shetland project, Scottish Hydro Electric Power Distribution, will be able to monitor the proportion of energy produced on Shetland that is derived from renewable sources using the control mechanism.

At the outset of the project, a group will be set up with representatives from all partners to monitor key performance indicators over the duration of the project to ensure that monthly and annual targets are met.

4.8 Past Performance

Shetland Islands Council has a positive record over the last 20 years of managing Structural Funds projects and of meeting the targets and outcomes set in the applications.

Over the last 29 years, Hjaltsland have successfully managed over 500 new build social housing projects and achieved completion of projects within the project timescales.

The Council and Hjaltsland have been working in partnership for a number of years to ensure that housing is available in all parts of Shetland. As a result, both organisations are in a strong position to deliver this project within the timescales indicated and achieve the anticipated outcomes.

4.9 Innovation and Value Added

Innovation

The electrical grid on Shetland is currently constrained due to a number of technical issues which prohibits the connection of more intermittent generation, ie wind. The new heating systems provide a mechanism for creating controllable demand which can be used to maintain system stability when the additional wind generation is connected. This is innovative at an EU level and can be used to inform national electricity grid operators on how to manage electricity grid networks with the advent of increasing renewable energy sources. In effect, Shetland will act as a demonstrator of a 'mini-UK' with learning that could be adopted across Scotland, the UK and Europe.

The project will provide homes with a new and innovative concept in storage heating, which will be highly insulated and designed to store heat, only releasing it when required to maintain the temperature at an optimum comfort level. This will provide a more efficient heating system with the potential to reduce costs.

Added Value

ERDF grant will enable this project to make a considerable impact on reducing Shetland's carbon usage by 4,000 tonnes per annum and reducing the high level of fuel poverty within social housing tenants. The storage heaters and hot water tanks are a key component of the Low Carbon Shetland project and are

seen as critical in being able demonstrate the overall success.

This project will add value and make a strong contribution to all of the Objectives of the Shetland Renewable Energy Strategy, and the Outcomes within the Shetland Single Outcome Agreement for 2010/11, while also directly assisting the Scottish Government to achieve renewables targets.

Part 5: Project Finance

Financial Summary

Total Project Costs (£)	3,204,400.00
Total Eligible Project Costs (£)	3,204,400.00
Total Non Eligible Project Costs (£)	0.00
Project Income (£)	0.00
Net Eligible Project Costs (£)	3,204,400.00
In kind contributions (£)	0.00
Eligible Match funding (£)	1,922,640.00
Structural Funds grant required (£)	1,281,760.00
Intervention Rate Required (%)	40.00000000
An appropriate annex is attached	<input checked="" type="checkbox"/>

Private Sector Participation

Private Sector Participation (£)	0.00
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Expenditure Profile

Expenditure 2007 (£)	0.00
Expenditure 2008 (£)	0.00
Expenditure 2009 (£)	0.00
Expenditure 2010 (£)	0.00
Expenditure 2011 (£)	662,600.00
Expenditure 2012 (£)	993,700.00
Expenditure 2013 (£)	1,548,100.00
Expenditure 2014 (£)	0.00
Expenditure 2015 (£)	0.00
Expenditure Total (£)	3,204,400.00

Project Funding

Funders

Funder	Eligible Amount (£)	Non-Eligible Amount (£)	Funding Date	Funding Status
Shetland Islands Council	629,200.00	0.00	28 Oct 2009	Confirmed
Hjaltland Housing Association Ltd	384,560.00	0.00	03 Aug 2010	Confirmed
Low Carbon Network Fund	908,880.00	0.00	30 Nov 2010	Expected

*Project Costs***Costs**

Cost	Amount (£)
Purchase Of Land	0.00
Purchase Of Real Estate	0.00
Purchase Of Equipment	0.00
Pre-contract Costs	0.00
Capitalised Revenue	139,800.00
Main Contract Works	3,064,600.00
Other Eligible Costs	0.00
Contingencies	0.00
Total	3,204,400.00

An appropriate annex is attached

Part 6: Compliance and Declaration

To receive European funding for this project you must comply with the following terms and conditions. Once content that the project fully conforms you must sign the declaration at the end of Part 6. This will confirm that your organisation agrees to comply with all the conditions set out here within Part 6.

6.1 Compliance with State Aids

Applicants must ensure the project adheres to the State Aid Rules. Please see the attached website for further details -

- http://www.stateaidscotland.gov.uk/state_aid/SA_MainView.jsp?pContentID=334&p_applic=CCC&p_service=Content.show&

6.2 Compliance with EC Directives and UK Environmental legislation

The project must be compliant with EC Directives or UK legislation on the environment. More information regarding the Directives and legislation can be found by using the link below.

- http://europa.eu/pol/env/index_en.htm

6.3 Compliance on Procurement

Project contracts must be subject of competitive tendering as applicable. This means complying with the Public Contracts (Works, Services and Supply) and Utilities Contracts (Amendment) Regulations 2003. For further guidance please use this link, which provides a number of reference documents you should review to check compliance.

- <http://www.scotland.gov.uk/Topics/Government/Procurement/Selling/10615>

6.4 Compliance with Equal Opportunities

Your organisation must have an active Equal Opportunities policy, and a formal complaints procedure in place. If the project's target group is restricted to a single sex or particular racial group you must comply with all relevant Equal Opportunities legislation.

If your organisation has had any unlawful discrimination findings in the last 3 years you must disclose the outcome and response.

Applicants and their subcontractors must promote equality of opportunity without discrimination on grounds of ethnicity, disability, sex, faith or age.

6.5 Publicity requirements of funding

As a condition of grant the Structural Funds contributions to this project must be publicised as follows:

- prominent site signage during any works
- permanent plaque with official logo on the premises
- acknowledgment and official logo in all press and media releases
- acknowledgment and official logo in all project documentation and presentations
- acknowledgment and official logo on specific websites.

The relevant European Structural Funds Regulations are available via this link (type into your browser):

- [http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/pdf/2007/fsfc/ce_1828\(2006\)_en.pdf](http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/pdf/2007/fsfc/ce_1828(2006)_en.pdf)

6.6 Compliance with Programme requirements

- The project must meet the strategic aims of the Programme. The Programmes are available on both the Scottish Executive and IAB websites. Chapter 4 within each document sets out the strategic aims of each Programme.
- You must be able demonstrate a clear evidence of demand for any grant funding.
- By applying you accept the pre-condition that core information about the project can be used on the Scottish Executive website and those of the Intermediate Administration Bodies (IABs) and European Commission to publicise Structural Funds.

6.7 Compliance with information requirements

Freedom of Information

The Freedom of Information (Scotland) Act 2002 introduced important rights for all to access information held by Scottish public authorities - anyone asking for information will be entitled to receive it unless the information requested falls within an exempt category. And even where information falls within an exempt category, there may be a public interest in the information being disclosed.

Data Protection

The form contains information which is personal data for the purposes of the Data Protection Act 1998 and in respect of which the Scottish Executive is obliged to supply the following information:

- The data controller is the Scottish Executive.
- The information you provide will be used for the following purposes:
 - a. Processing your application. Your application will be made available to the Advisory Group for the relevant Priority of the European Structural Fund Programme and to the Intermediate Administration Body (IAB) contracted or sub-contracted to the Scottish Executive.
 - b. If your application is successful, we may publish this application in hard copy or on the internet.
 - c. Data may be used for statistical and Scottish Executive performance reporting and evaluation.
- Apart from a) to c) above, and subject to the surveys and evaluations paragraphs below, the information you provide will not be disclosed to any other organisation for any purpose other than detecting or preventing fraud. For the purpose of the detecting and preventing fraud, data may be disclosed to (i) subcontractors or sub-contractors employed by the Scottish Executive for this purpose (ii)

the European Commission (iii) the European Court of Auditors (iv) Audit Scotland and (v) law enforcement agencies.

- The Scottish Executives representative for the purpose of the Data Protection Act is the Departmental Record Officer, Scottish Executive, OPS: ISIS, Saughton House, Edinburgh, EH11 3XD, Tel: 0131 244 3728.

Surveys and Evaluations

- Follow-up surveys and evaluations will be held during the lifetime of the Programmes. Such surveys and evaluations may be carried out by the Scottish Executive or an appointed contractor.
- The selected projects will be asked to supply the Scottish Executive, IAB or appointed contractor with details about the project/course/activity, including participants' names and addresses from which the Scottish Executive, IAB, contractor or sub-contractor may select an appropriate sample.
- Where partners or contractors are undertaking the training/activity, project sponsors will be responsible for ensuring the contract or partnership agreement put in place ensures full access is available to all participants and project records. You will also be responsible for letting all participants know that they may be asked to take part in a research survey or evaluation.
- Participants' co-operation in the survey or evaluation will be voluntary and information given treated in the strictest confidence. The result of the survey or evaluation will not identify individual participants. You will have to give participants a letter explaining this and providing them with an option to opt-out of the survey if they so wish. If there is no evidence of an opt-out letter you must supply the details of participants as and when required.
- Applicants must retain documents relating to the implementation of the project and its financing until at least 31 December 2019.

6.8 Compliance with legal responsibilities

If you give information which you know or suspect is untrue or misleading you may be committing an offence which could lead to prosecution.

6.9 Compliance with planning rules

If planning permission has been obtained, details on the type of planning permission (full, outline, conditional, unconditional), should be provided showing the date of approval. If there are any outstanding planning procedures/appeals or if there are likely to be any further planning appeals, these should be clearly explained in the relevant parts of this application, stating the likely timescale for the resolution indicated.

6.10 Specific Conditions of Grant

If there are any specific conditions of grant for your approved project, these will be notified to you online, via the EUROSYS system. When returning your signed offer of grant acceptance, you are committing to all conditions, general and specific, contained therein.

6.11 Declaration

I certify that the information contained in this application is correct and confirm that this project will be carried out as described, and that the grant requested is the minimum necessary for the project to proceed. I confirm that this organisation will undertake regular monitoring of the project to ensure that it conforms to the application and the Regulations and that adequate management and financial safeguards are in operation.

I will inform the Intermediate Administration Body (IAB) and the Scottish Executive immediately of any changes to the project. I acknowledge that this project will be subject to regular monitoring, quarterly reporting and undertake to keep adequate records for this purpose. I also acknowledge that the European Commission, European Court of Auditors, the Scottish Executive's Intermediate Administration Bodies and/or the Scottish Executive may carry out on the spot checks at any time on the records of the project applicant, its partners or other parties involved in this project.

I undertake to repay on demand, to the Scottish Executive, any grant paid, if the European Commission, the European Court of Auditors and/or the Scottish Executive decide after investigation that the project has not been carried out in accordance with the application, National Rules and/or the European Structural Fund Regulations.

I declare that the information on this form and any other information given in support of this entry is correct to the best of my knowledge and belief. I authorise you to make any enquiries you consider necessary (including checks with credit reference agencies) for my application as long as the data will not be used for any purpose or other means than the grant assessment. I agree that all or part of this application may be copied or stored by electronic or other means and copies made available. Any copies made for assessment purposes will be destroyed after the assessment is completed. I further agree that if this application is successful, information within can be published in hard copy and the internet.

Terms and Conditions
Acknowledged and Agreed



Applicant Name Shetland Islands Council
Total Funding Commitment (£) 1,922,640.00
Name of Designated Officer Alistair Buchan
Position in Organisation Chief Executive
Signature of Designated Officer

Signature Date