Report for Resolution

Report to	Executive 15 October 2008	9
Report of	Head of Strategic Housing Services	
Subject	Improving Energy Efficiency in Existing City Homes	

Purpose

To select an option for the installation of measures to improve home energy efficiency, subject to funding being agreed.

Recommendations

That financial assistance be approved to vulnerable households to replace old and inefficient boilers (Option A) subject to sufficient capital funding be made available in the 2009/10 and 2010/11 Non-Housing Capital Programmes.

Financial Consequences

There are no direct financial consequences to this report. The preferred option will be put forward for inclusion in the capital programmes for 2009/10 and 2010/11. Approval for each programme will be sought from Executive at the appropriate time.

Risk Assessment

The principal risk to the success of the programme is a low take-up of offers of assistance. This is estimated to be a low risk because referrals will be generated through the larger Norwich Warm Homes Project which aims to bring about home energy improvements in a minimum of 500 homes occupied by vulnerable households.

Strategic Priority and Outcome/Service Priorities

The report helps to meet the strategic priority “safe and healthy neighbourhoods – working in partnership with residents to create neighbourhoods where people feel secure, where the streets are clean and well maintained, where there is good quality housing and local amenities and where there are active local communities” and the service plan priority to improve standards in private sector housing.

Executive Member: Councillor Morrey - Sustainable City Development
Councillor Arthur – Housing and Adult Learning

Ward: All

Contact Officers

Paul Swanborough, Private Sector Housing Manager	01603 212388
Abbie Brook, Private Sector Housing Home Energy Specialist.	01603 212544

Background Documents

Report to the Climate Change Panel Tuesday 8th July 2008

Costings for options A and B

Report

Click here to type heading

1. At the meeting of Council on February 19th 2008 the Non-Housing Capital Plan 2008-12 and Non-Housing Capital Programme 2008-9 were approved subject to a sum of £345,000 being included in 2009-10 and an additional £345,000 being made available in 2010-11 for the installation of measures to improve energy efficiency in new and existing city homes.

2. Officers and the Climate Change Panel were charged with investigating the best way to spend this in terms of maximising the city's carbon reduction impact.

3. Two options were discussed at the Climate Change Panel meeting held on the 8th July 2008

4. **Option A** is to offer grant to vulnerable owner-occupiers to upgrade their heating systems where the boiler is more than 10 years old or where repairs are required for a faulty or intermittently working system that is outside of the manufacturer's warranty period. Approximately 200 boilers would be replaced providing an estimated ongoing annual saving of 340 tonnes of carbon dioxide. This would be an extra option available to clients already receiving assistance through the Norwich Warm Homes Project so would have a minimal extra revenue cost estimated at £200 for promotional material.

5. **Option B** is to offer grants to owner-occupied households for the installation of solar-thermal water heating systems. This would be a top-up to existing Low Carbon Buildings Programme grant with assistance ranging from £500 for able-to-pay households to £1,500 for vulnerable households. Potentially this could lead to between 400 and 600 households installing solar-thermal water heating each year with an estimated maximum ongoing saving of 180 tonnes of carbon dioxide. However, the experience of similar schemes in England indicates that take-up would be considerably lower than this. It would also require a dedicated project officer costing the authority in the region of £100,000.

6. The Climate Change Panel decision was to support option A on the grounds of significantly higher carbon dioxide savings at lower overall cost. It was also acknowledged that option A would have a more significant impact on reducing fuel poverty because of greater overall annual fuel-cost savings to the individual households. It did, however, recognise the potential option B for the longer term if money becomes available and asked for costings for both schemes to be submitted to the Executive. These are attached to this report.

7. The Head of Finance has indicated that there may be insufficient capital funds available to progress this work in 2009/10 and 20010/11.

Report to the Climate Change Panel

Outline of possible schemes to improve energy efficiency in existing city homes

Tuesday July 8th, 2008

Abbie Brook, Private Sector Housing Home Energy Specialist

1.0 Background

1.1 At the meeting of full Council on February 19th 2008 the Non-Housing Capital Plan 2008-12 and Non-Housing Capital Programme 2008-9 were approved subject to a sum of £345,000 being included in 2009-10 and an additional £345,000 being made available in 2010-11 for the installation of measures to improve energy efficiency in new and existing city homes.

1.2 It was also decided that relevant officers and the Climate Change Panel should investigate the best way to spend the allocated funding with a view to maximising carbon reduction and that they would be required to report to the Executive on the possible options.

2.0 Option A – The Norwich Warm Homes Project heating grant

2.1 Background to efficient heating systems and their impact on housing conditions and health

2.1.1 Efficient heating systems and insulation make the most significant improvements to a property's energy efficiency and are key to helping a household to achieve affordable warmth. Around 60% of a home's CO_2 emissions come from the boiler and with the exception of solid wall insulation (which is only applicable to solid wall properties and has an average cost of around £6,000 per property) installing an A-rated condensing boiler and heating controls delivers the greatest carbon and cost savings of all standard energy efficiency measures (approximately 1.7 tonnes and £250 per year).

2.1.2 Since April 2005 all new gas and oil fired boilers installed in the UK are required to have either an A or B rating for energy efficiency and be 'condensing' (there are a few exceptions where this isn't possible for a property). A-rated boilers have an average efficiency of around 90-92% compared to 65-80% for traditional boilers, meaning that a much greater proportion of the fuel used is actually converted in to heat.

2.1.3 Every year within Norwich an average of 70 residents die from preventable cold related illnesses and many more (especially those who are over 60 years of age or have a long-term illness or disability) suffer from respiratory conditions, loss of mobility and the exacerbation of existing illnesses as a result of living in cold conditions. Properties that are inadequately heated also tend to be prone to damp and mould growth.

2.1.4 The nationally accepted indicator for the presence of a category 1 excess cold hazard under the Housing Health and Safety Rating System (HHSRS) is a SAP rating of 35 (this is also the Government's chosen proxy for the identification for a household suffering from fuel poverty under National Indicator 187). The Greater Norwich Private Sector Stock Condition Survey

(2005) found that there were approximately 2,730 properties within Norwich with a category 1 hazard for excess cold. This represents 65% of all category 1 hazards within Norwich's private sector stock.

2.2 Existing financial assistance

2.2.1 The Government's Warm Front scheme currently offers grants of up to £2,700 for the installation of energy efficiency improvements (including heating systems and boiler replacements) to vulnerable private sector households. Warm Front only offer grants for heating improvements where there is no central heating system or the system is in-operational. It does not offer grants for the replacement of old and inefficient heating systems.

2.2.2 To qualify the applicant or their spouse must have a child under 16 (or be pregnant and have a maternity MAT B1 certificate) and be in receipt of qualifying benefits, be over 60 years of age and receive a qualifying benefit or receive an income and/or disability-related benefit from the passporting benefit list, e.g. Attendance Allowance or Council Tax Benefit (where this includes a disability premium).

2.3 Issues with Warm Front

2.3.1 Consultation with Norwich Care and Repair indicates that the majority of Warm Front grants for heating works usually take around 6 months from initial application to completion of works. During the winter months (where there is highest demand for grants) the waiting period frequently increases beyond 6 months. This means that many vulnerable households are left without a working central heating system throughout the winter and this can have very serious consequences for the health of the occupants. There is a fast track system available for the most vulnerable clients, however this is limited to cases where either the applicant or their spouse is over 85 years of age or has a terminal illness.

2.3.2 Although a standard boiler replacement is usually covered within the £2,700 grant available, where a full central heating system is required the cost often exceeds the grant maximum, with the average excess payment required being approximately £1,800. At present, Norwich City Council offer vulnerable households the option of a Decent Homes Loan (DHL) to cover the excess payment.

2.4 Our proposed scheme

2.4.1 Our proposal will maintain the current practice of forwarding all eligible households to Warm Front via direct referrals or through Norwich Care and Repair (as is deemed most appropriate) and DHL assistance will still be offered for any excess payments required for central heating system installation. However, we also propose that a grant will be offered to all vulnerable owner occupier households to upgrade their heating systems where the boiler is more than 10 years old (i.e. it was installed before or during 1998) or repairs are required for a faulty or intermittently working system that is outside of the manufacturer's warranty period.

2.4.2 In addition to covering the cost of boiler replacements and repairs, the grant will also be used to install full heating controls (programmer, room thermostat and TRVs) in households where heating works are carried out under the scheme and all households will also be provided with 100%

grants for loft and cavity wall insulation (where applicable) through the Council's Norwich Warm Homes Project.

2.4.3 Further research will be undertaken to investigate whether properties that have a mains gas connection but are currently heated using electric storage heaters (particularly the older, non-fan assisted varieties) or solid fuels could also be offered financial assistance for switching to a gas central heating system under the scheme, as these properties are often the most expensive to heat to an adequate standard.

2.4.4 It is proposed that privately rented properties would be excluded from this grant scheme as the Council is in the process of developing the Norwich 'Warmer Let' scheme (part of the Norwich Warm Homes Project) which will provide private sector landlords with grants towards the cost of various heating improvements and other energy efficiency measures. Private sector tenants will also still be able to access funding for heating improvements via the Government's Warm Front scheme.

2.4.5 It is envisaged all works under the scheme will be carried out by an approved heating engineer/installer and that local heating installers would be invited to tender for the contract.

2.4.6 We also propose earmarking a percentage of the allocated budget to provide emergency assistance for Warm Front-eligible vulnerable households without operational central heating between November 1st and March 31st. The full eligibility criteria for this assistance will be determined in consultation with a group of Norwich City Council officers and relevant local agencies.

2.4.7 This scheme would 'bolt on' to the Norwich Warm Homes Project, as assessment of the need for heating improvements and Warm Front eligibility will be a standard part of the assessment process. Therefore the scheme's administration requirements could largely be absorbed using existing resources and it is not expected that any significant additional revenue funding would be required.

3.0 Option B – A renewable energy grant scheme

3.1 Background to small-scale renewable energy

3.1.1 Small-scale renewable energy systems can be retro-fitted to existing properties to generate a proportion of the energy required by the household. The type of energy produced depends on the system. Solar photovoltaics (PV), small-scale wind turbines and hydroelectric systems produce electricity, whereas ground source heat pumps, solar thermal systems and biomass stoves and boilers generate heating and/or hot water.

3.1.2 Micro renewables can be a complex and sometimes controversial subject mainly due to their high level of visibility and the negative perceptions of some regarding their aesthetic impact on the built environment, issues regarding compatibility with existing heating/hot water systems and the fact that claims of performance are variable and hard to verify on a local level (particularly with some of the more recently-developed technologies e.g. micro wind). There is also a fundamental issue of ensuring that the systems selected are right for the property and the needs of the

occupants, to maximise the benefit of installing a renewable energy system.

3.1.3 The most popular system within the UK's private sector households is solar hot water heating. The average system costs between £2,500 and £4,000 and can typically produce 30-50% of a property's annual hot water requirements, depending on the type of system and its size. Domestic systems reduce carbon dioxide emissions by around 325kg per year when installed in a gas heated property (higher savings may be achieved in homes heated by oil or electricity) and can save householders an average of £90-£120 on their annual energy bills.

3.2 Existing financial assistance

3.2.1 The Government have provided grants for the installation of renewable energy systems for several years, previously through the Clear Skies grant scheme and now under the Low Carbon Buildings Programme. The grants available currently range from £400 for a solar hot water heating system up to £2,500 for larger PV, hydro or micro wind systems and are available to all privately owned homes in the UK providing that they meet basic energy efficiency requirements (they must have loft and cavity wall insulation where possible, heating controls and all light fittings must use energy saving bulbs). Applicants must also meet other basic scheme criteria (i.e. they must use accredited installers).

3.2.2 The most recent data received from the Energy Saving Trust indicates that in 2005/6 there were 16 grants issued through Clear Skies to households in Norwich, 13 of which were for solar hot water heating systems. This fell to 4 households in 2006/7.

3.3 Our proposed scheme

3.3.1 Having looked in depth at the various micro-renewable systems available and consulting with local authorities that operate their own renewable energy schemes it was determined that the scheme should focus initially on the most established and cost-effective technology; solar hot water heating.

3.3.2 Although many local authorities previously favoured the idea of providing interest-free loan schemes for the installation of renewable energy systems, recent research by local authorities in West Sussex offering schemes of this kind has shown that these are of limited use as an incentive. This is primarily due to the fact that those who can afford to install a renewable energy system usually do not need to obtain a loan to do so and those for whom financial assistance would be necessary do not find a loan to be a sufficiently great incentive.

3.3.3 It is therefore our proposal to operate a grant scheme for private sector households to help encourage the installation of solar hot water heating systems. The proposal is to offer non-vulnerable households a grant of £500 towards the cost and to offer vulnerable households a grant of £1,500 or 50% of the cost (whichever is greater).

3.3.4 All households will be encouraged to apply for a Low Carbon Buildings Programme grant of £400 and will be required to meet the same energy efficiency criteria as the Government's scheme (applicants will be directed

to energy efficiency grants where applicable). Vulnerable households will also be offered assistance with the application process.

3.3.5 The ability of the Private Sector Housing Team to administer the scheme would be dependent additional revenue funding being sourced to cover staffing costs and the production of promotional materials. At present no available source of revenue funding has been identified.

4.0 Conclusions and recommendations

4.1 It is generally accepted that energy efficiency is the logical first step to reducing both a home's energy demand and carbon emissions as energy efficiency measures minimise the energy required to provide adequate heat, light and hot water. For example, the Low Carbon Buildings Programme sets energy efficiency criteria as part of its grant application process as it strongly supports the idea that energy conservation should be maximised before any additional energy (renewable or otherwise) is generated.

4.2 As has been demonstrated within the report, the carbon and cost savings from energy efficiency measures can exceed those resulting from the installation of renewable energy systems such as solar thermal. Direct comparison for an average property heated by mains gas shows that whereas £90-120 and 375kg of CO_2 could be saved by installing a solar hot water heating system, installing a condensing boiler and heating controls would save more than 4 times as much CO_2 and would deliver more than twice the financial savings for the householder.

4.3 We are keen to promote the use of renewable energy within the City's homes and are in the process of investigating possible cross-tenure renewable pilot projects as part of the Norwich Warm Homes Project, however, both the Home Energy Specialist and Private Sector Housing Manager believe that 'option A' would provide both greater carbon and financial savings and make the biggest contribution to increasing the average SAP rating of the City's private sector stock. In addition, by supporting the installation of efficient heating systems 'option A' would significantly improve both the housing conditions and health of some of Norwich's most vulnerable residents by helping to both alleviate and prevent fuel poverty.

Estimated Revenue Costs for 'Option A' and 'Option B'

1. Option A – Heating grant scheme

Description	Cost
Salary and on-costs	£0
Recruitment, overheads and Steria support	£0
Production of promotional materials / events	£200
Total	**£200**

There are no salary-based costs for option A as the scheme would 'bolt on' to the Norwich Warm Homes Project and its administration would be covered by the Home Energy Specialist and Norwich Warm Homes Project Officer.

All other costs (e.g. travel) have been budgeted for as part of the funding received for the Norwich Warm Homes Project (supplied by E.ON). This funding has been secured for one calendar year (commencing September 2008) however E.ON have expressed a strong interest in funding the project on a longer-term basis following a successful 12-month pilot.

2. Option B – Renewable grant scheme

Description	Cost
Salary and on-costs	£60,460
Recruitment, overheads and Steria support	£36,000
Training	£800
Production of promotional materials / application packs	£2,000
Launch event	£500
Total	**£99,760**

The costs for option B include the establishment of a Microgeneration Advisor position at a starting salary of £26,000.