

Annex I to the Utility Regulator Consultation:

NI Energy Efficiency Levy Strategic and Operational Review 2008

**A REPORT TO THE UTILITY REGULATOR ON THE
NORTHERN IRELAND ENERGY EFFICIENCY LEVY PROGRAMME**

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Executive Summary

Since 1997/8 an energy efficiency levy (the “Levy”) has been raised on all supplies of electricity in Northern Ireland to fund energy efficiency measures. Charged per kWh of all electricity supplied but set initially at a level corresponding to £1 per year per customer, the amount has since increased to its current level corresponding to more than £7 per year per customer. This adds approximately £2.70 to the average annual domestic electricity bill, with the balance of costs being paid for by non-domestic demand. The Utility Regulator asked Skyplex Consulting (“Skyplex”) to undertake a review of the Energy Efficiency Levy Programme (EELP) and, where appropriate, make recommendations as to improvements that could be considered. This document is the result of that review, which Skyplex understands will form the basis of a consultation by the Utility Regulator.

Under the EELP arrangements, licensed electricity suppliers (“suppliers”) bid for funding to carry out energy efficiency measures. The arrangements are administered on behalf of the Utility Regulator by the Energy Saving Trust (EST). NIE Supply, and now its successor supply company, NIE Energy, has bid for the majority of Levy funding. Recently other suppliers too have successfully bid for Levy funding and have started making significant contribution although, so far, only in respect of non-priority non-domestic customers. Over the twelve years of the EELP, suppliers will have employed a total of around £35m of Levy funding and have commissioned measures that will have given rise to total lifetime savings of over 4000GWh, nearly one million tonnes carbon and estimated financial savings to customers of over £250m. Furthermore, a feature of the EELP for several years has been the ring-fencing of a substantial proportion of the Levy funds for “priority customers”, being those that are considered likely to be fuel poor.

Principal concerns with the current EELP scheme include:

- the incentive payments made to suppliers to exceed energy savings targets are viewed as too high;
- there is little or no competition between suppliers bidding for schemes;
- the ring-fencing of funds for particular types of measures, may mean the EELP is less effective than it could be in tackling the fuel poverty.

Specific proposals for reform are that:

- organisations other than licensed electricity suppliers should be permitted to compete for Levy funding, albeit certain restrictions as to who should be eligible to apply for Levy funding should be considered;
- the incentive rate should be reduced from £5120 per GWh of additional energy savings to £1000 per GWh, and more realistic incentive targets set;
- pending analysis of the 2006 House Condition Survey, the Utility Regulator should seek views as to the size of the Levy. In the absence of views to the contrary, the Levy should remain broadly at current levels for the first year (with appropriate indexation). Taking the reduction in incentive payments into account, the funding for measures costs should be increased by £1m which would, except in the event of a very large increase in energy savings, not result in any increase in the total Levy funding including incentives;
- the size of the Levy should be kept under review, based on the nature and number of schemes submitted. If there is a high demand for funding whilst scheme costs remain acceptably low, consideration should be given to increasing the size of the fund in later years;
- the relative focus of the EELP on priority schemes - currently 80% - should be reviewed in light of: (i) the 2006 House Condition Survey; (ii) the Utility Regulator seeking views on the issue; (iii) further detail emerging of other initiatives to assist with fuel poverty; and (iv) on an ongoing basis, depending upon the types of schemes that are submitted following changes to widen the range of organisations eligible to bid for Levy funding;
- the emphasis on whole house solutions should be lessened with a view to enabling measures to be spread over a larger number of homes within the priority group, thereby levelling up the worst cases of fuel poverty or maximising energy efficiency gains alleviating fuel poverty. Whole house solutions should be selected on the grounds of their cost-effectiveness;
- views should be sought as to whether schemes should be permitted to assist the purchase costs of heating oil and, if so, how this assistance should be prevented from going beyond that necessary to give effect to energy efficiency and becoming, instead, a pure fuel subsidy;

- the Utility Regulatory should seek views on ending the segregation of funds between non-priority domestic measures and non-priority commercial measures, in order to maximise energy efficiency gains;
- the 20% additionality criterion should be augmented by a requirement for scheme proposals to justify why measures are additional;
- the 5% cap on indirect costs should be replaced by a more sophisticated criterion. Views should be sought on the appropriate form and level of the cap to ensure that, whilst the allowance for indirect costs is realistic, the maximum funds are available to be spent on measures;
- the raising of Levy funds should not be extended to gas unless it is also extended to oil;
- the option of placing obligations on suppliers to submit a certain quantity of schemes should not be introduced initially but should be kept under review in light of experience; and
- the Utility Regulator should seek views as to whether scheme sponsors should be required, in the interests of transparency, to explain to customers the origin of funds used to pay for energy efficiency

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1 Introduction

Since 1997/8 an energy efficiency levy (the “Levy”) has been raised on all supplies of electricity in Northern Ireland to fund energy efficiency measures. Charged per kWh of all electricity supplied but set initially at a level corresponding to £1 per year per customer, the amount has since increased to its current level corresponding to over £7 per year per customer.

The Utility Regulator has undertaken periodic reviews of the Energy Efficiency Levy Programme (EELP) and had committed to a further review in 2009. However, the Utility Regulator has decided to bring forward this review to 2008: given that the scheme has been running in largely the same format since its inception; in light of the changing energy environment and energy efficiency priorities in this time; and given also the possible implications for the EELP of the EU Energy Services Directive. Also the current arrangements cover the period up to 2009/10 and bringing forward the review will allow any changes to be put in place in good time for 2010/11.

As part of its review, the Utility Regulator asked Skyplex Consulting (“Skyplex”) to undertake a review of the EELP arrangements and, where appropriate, to make recommendations as to improvements that could be considered. Skyplex understands that this report will be used by the Utility Regulator as the basis of a formal consultation. Skyplex met with a number of organisations involved in, or with an interest in, the current arrangements. Skyplex wishes to thank these organisations for sharing their views and opinions, which were extremely helpful in the preparation of this document.

The structure of the document is as follows: Section 2 gives an overview and background to the EELP; Section 3 describes other initiatives relevant to energy efficiency, both in Northern Ireland and elsewhere; Section 4 discusses issues with the current EELP; Section 5 describes potential solutions; Section 6 discusses alternative solutions; whilst Section 7 lists a number of specific proposals.

2 The Energy Efficiency Arrangements

2.1 Overview

Under the EELP arrangements for Northern Ireland, licensed electricity suppliers (“suppliers”) bid for funding to carry out energy efficiency measures. The arrangements are administered on behalf of the Utility Regulator by the Energy Saving Trust (EST) which has developed and maintains a “Framework Document”¹, setting out the criteria against which proposed schemes are evaluated, as well as administrative requirements of the programme. EST also evaluates the proposed schemes submitted by suppliers; selectively audits completed schemes; and recommends, as appropriate, the release of funds to the supplier.

Under each scheme the supplier undertakes to take energy saving actions or “measures”. Measures are not limited to saving electricity but can include also measures that reduce consumption of other energy sources in homes and commercial premises. Providing it can be demonstrated that measures are taken to a required standard, the supplier is accredited in the year in which the measures are taken with having made an energy saving equal to an estimate of the discounted energy savings over the expected lifetime of the measures². For example, the installation of 270mm of loft insulation in a three bedroom semi-detached is assumed to save 124MWh over the 30 year life of the insulation, and the supplier is accredited with having achieved the 124MWh saving in the year in which the insulation is installed even though most of the actual savings clearly accrue later, i.e. over the whole life of the insulation. Estimates for a wide range of standard measures are required for this approach, and these are based on research that has been undertaken by the Buildings Research Establishment and incorporated into the Buildings Research Establishment Domestic Energy Model (BREDEM). At least for the standard measures, using this approach avoids the expensive task of having to monitor actual savings. Where non-standard measures are proposed and hence no standardised estimate is available, the supplier must also propose a means by which the energy saving can be independently estimated or verified.

¹ For the latest version of the Framework Document, see “Recommendations on a Framework for Northern Ireland’s Energy Efficiency Levy Programme”, Energy Saving Trust, March 2008.

² In line with guidance in the Treasury “Green Book” for the discounting of future cashflows, future energy savings are currently discounted by 3.5%.

Energy savings are “fuel standardised” to reflect the relative carbon content of different fuels, i.e. a saving of 1 MWh of energy in the form of heating oil is deemed to be equivalent to a saving of only 0.41MWh of electricity, due to the lower carbon content of a MWh of oil compared to the carbon expended in generating a MWh of electricity³. Thus, references in the EELP to energy savings should more properly be regarded as carbon savings expressed in units of electrical energy having the same carbon content.

The importance of energy efficiency measures in the alleviation of fuel poverty is also widely recognised⁴. Hence a feature of the EELP for several years has been the ring-fencing of a substantial proportion of the Levy funds for “priority customers”, being those that are considered to be likely to be fuel poor. Of the remaining funds for non-priority customers, these are further sub-divided into funds for non-priority domestic customers and funds for non-priority non-domestic customers.

Northern Ireland Electricity (NIE), under the aegis of its Transmission and Distribution Licence, raises the Levy funds from suppliers through the PSO Levy⁵ as a per kWh charge on all supplies of electricity in Northern Ireland, and releases funds to suppliers as instructed by the Utility Regulator. Since the inception of the EELP, NIE Supply, and now the successor supply company, NIE Energy, has bid for the majority of Levy funding. Recently other suppliers have also successfully bid for Levy funding and have started making a significant contribution, although so far only in respect of non-priority non-domestic customers. Over the twelve years of the programme up to and including 2008/9, NIE Energy and the other suppliers will have employed a total of around £35m of Levy funding and will have commissioned measures that will have given rise to total lifetime savings of over 4000GWh, nearly one million tonnes carbon and estimated financial savings to customers of over £250m.

³ To calculate the carbon content of a unit of a MWh of electricity, assumptions are made regarding the generation mix in Northern Ireland.

⁴ As noted, the EELP is a carbon reduction rather than pure energy efficiency scheme, and that, in principle, carbon reduction would not necessarily result in savings for customers. However, the Framework Document requires that customers benefit and, in practice, carbon reduction measures taken under the EELP do result in financial savings to the customer.

⁵ The Public Service Obligation or PSO Levy is a charge on all electricity supplies by NIE, as the holder of a transmission licence, used mainly to underwrite the excess costs to NIE Energy’s Power Procurement Business of certain legacy power purchase agreements. The PSO also funds the EELP and a number of other measures.

2.2 Funding and Targets

When the then Director General of Electricity Supply for Northern Ireland (DGESNI) first introduced the Levy in 1997/8, the Levy was set at a level corresponding to £1 per customer for the forecast number of customers in Northern Ireland, raising around £665,000 per annum. This translated into a unit charge of around 0.01p/kWh, equivalent to 37 pence on the average annual domestic electricity bill, with the balance of costs being paid for by non-domestic demand.

The Levy was reviewed and subsequently increased to the equivalent of £1.50 per customer in 1999/2000 and to £2 in 2000/2001. In 2001, the Northern Ireland Assembly passed a motion encouraging the DGESNI “*to contribute to the eradication of fuel poverty*” by increasing the Levy to the equivalent of £5 per customer to create a fund to tackle fuel poverty. Ofreg consulted on the increase in November 2001⁶ and introduced the higher Levy in 2002/3, along with the ring-fencing of 80% for priority customers. In 2004/5 the Levy was maintained at the new higher rate, although the 90% ring-fenced for domestic customers was funded by the Department of Enterprise Trade and Investment (DETI) out of NI block funding from direct UK taxation, so as to mitigate tariff increases. For 2005/6, DETI again funded the Levy, with DETI funding being the equivalent of £6 per customer with an additional £0.4m being funded through the PSO.

More recently, the Levy was increased to the equivalent of £7 per customer for the year 2007/8 with further increases of 2.5% per annum to allow for inflation, to £7.175 in 2008/9. This translates into a charge of 0.07p/kWh, adding in the region of £2.70 to the average annual domestic bill. On the basis of forecasts of customer numbers from NIE, this amounts to Levy funding of £5.6m in 2007/8, £5.9m in 2008/9, rising to £6.2m in 2009/10, of which approximately £2.2m rising to £2.4m will have been raised from domestic customers with the balance of approximately £3.5m rising to £3.8m being paid by non-domestic demand.

An integral part of the arrangements is the encouragement for suppliers to obtain funding for energy savings measures from third parties to supplement the funding received from the Levy. This has been achieved by setting an energy savings target, combined with an incentive payment, which is on top of the funding provided for

⁶ See “The Energy Efficiency Levy: A Consultation Paper by the Director General of Electricity Supply for Northern Ireland”, November 2001, Ofreg.

measures⁷. The incentive payment was originally set at £4000, but is now equal to £5120, for each additional GWh (i.e. 0.4p rising to 0.512p for each additional kWh) of energy savings achieved over and above the supplier's target. Any additional funding a supplier obtains will enable it to undertake more measures and, providing it exceeds its target, earn increased incentive payments. In order that incentive payments are not earned too easily, the energy savings targets are set assuming that the suppliers will obtain a certain level of third party funding such that more measures may be undertaken than the EELP funding alone would finance. The assumptions vary by group as follows:

Group	Third Party Funding Assumption	Proportion of Levy Funding
Priority Group	10.25% ⁸	80%
Non-Priority Group	50%	10%
Non-Domestic	70% ⁹	10%

Thus, taking assumed third party contributions into account, Levy funds of £5.91m for 2008/9 equate to a total of £8.42m available to be spent on energy saving measures.

For each of the priority, non-priority domestic and non-priority non-domestic groups, EST has made assumptions about a likely mix of different energy savings measures, together with an estimate of the typical cost of each measure. Combining these assumptions with the total available funding - Levy and third party - in each group gives the number of measures it is estimated can be undertaken. Using the estimates of lifetime discounted energy saving for each measure then gives the estimated total discounted energy saving that is deemed to be achievable with the Levy funding in each group and, hence, in total. Targets for individual suppliers in each group are determined by multiplying the target for the group by the proportion of the available Levy funding that the supplier has been awarded.

⁷ Incentive payments thus increase the total cost of the Levy over the £5.91m for 2008/9. At recent levels, incentive payments have increased the total cost to be funded by electricity customers to around £7.3m.

⁸ It is assumed that of measures taken in the priority group, 41% are taken in Social Housing, for which there is a third party contribution of 25%, and the remaining 59% are owner-occupied homes, for which there is no non-Levy funding available. This gives an average for the group of 10.25%.

⁹ Increased from 50% in the June 2007 Framework Document.

2.3 Criteria for Funding

The Framework Document developed for the Utility Regulator by EST sets out a number of detailed criteria that proposed schemes must satisfy. Broadly these are that measures must be proven, i.e. that funding is not available for research or technology demonstrations, and that the present value of the lifetime benefits to customers should exceed the total cost of the measures. Projects should secure the maximum level of non Levy funding from customers and third parties, e.g. equipment manufacturers; housing providers; and fuel suppliers. However, measures should be “additional”, i.e. the measure should not have taken place without Levy funding, which is interpreted to mean that the funding provided under the Levy generally should not be less than 20% of the total costs. Having satisfied the various criteria, Levy funding is awarded to the schemes that are most cost-effective, i.e. which offer the greatest energy savings per pound of Levy funding.

The Framework Document ring-fences amounts of the available funding for specific activities. In particular, since 2002/3, 80% of Levy funds have been ring-fenced for a “priority group” consisting of households considered to be at risk of fuel poverty. This 80% is split into four initiatives:

(a) *Support for the Department for Social Development’s Warm Homes Plus Programme*¹⁰

The Department for Social Development (DSD) operates the “Warm Homes Scheme”¹¹ with the aim of alleviating fuel poverty by providing “whole house solutions” consisting of boiler replacement, heating controls and insulation. Warm Homes Plus is funded out of general taxation and is targeted at householders in receipt of benefits and those over 60 years old. However, scheme rules limit grants to given properties to £4,300¹², which for some dwellings is insufficient to provide the complete range of measures that the grant is intended to fund. In these cases, funding from the EELP may be used to supplement the DSD grant, allowing the measures to be undertaken.

¹⁰ As noted in Section 3, support for this programme is being phased out.

¹¹ See: The Domestic Energy Efficiency Grants Regulations (Northern Ireland) 2002.

¹² The Domestic Energy Efficiency Grants (Amendment) Regulations (Northern Ireland) 2008 increased this figure from the previous grant maximum of £3,700.

(b) *Whole house solutions for properties with no central heating, solid fuel central heating or electrical storage heating*

Schemes qualifying for this category must install both insulation and heating measures for homes having no central heating, solid fuel central heating or electric storage heating. Schemes must explain how they are intended to be targeted at vulnerable homes, being households including a person over 60, someone with a disability or long-term illness or with one or more children under 16.

(c) *Whole house solutions for properties with old oil-firing or with LPG-fired central heating*

In response to reports from NIE Energy that it was having difficulty in finding sufficient homes with solid-fuel, electric or no heating, funding is available also to homes with oil-fired or LPG-fired boilers that are more than 15 years old or which are broken beyond economic repair. Again, vulnerable homes must be targeted.

(d) *Individual energy efficiency measures for priority group homes*

Some vulnerable homes will not qualify for whole house solutions, by virtue of not being without heating systems or having solid-fuel, electric or old oil or LPG heating systems. Such homes may nevertheless benefit from insulation or heating controls, and a small element of Levy funding (£0.56m in 2008/9) is ring-fenced for this purpose.

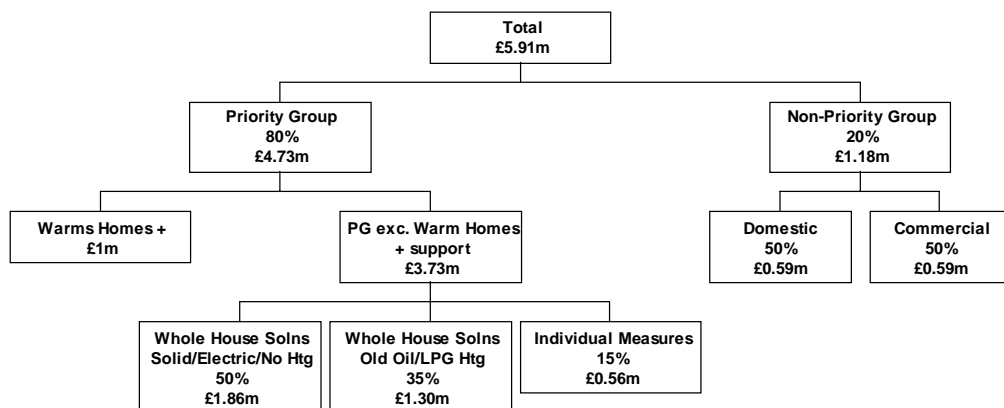


Figure 1 - Ring-fencing of Energy Efficiency Levy, 2008/9

Of Levy funds for the non-priority group, half (corresponding to £0.6m in 2008/9) are ring-fenced for non-priority domestic customers and half for non-domestic customers, i.e. commercial customers.

Levy funds are available for schemes involving renewable energy including, for instance, micro wind generation and solar heating. Such schemes are subject to the same scheme criteria and must compete for Levy funding against all other energy savings measures.

2.4 Levy Administration

In addition to specifying the eligibility criteria and the available funding for the various groups, the Framework Document describes administrative arrangements for the EELP.

Suppliers may bid for funding for any given year, which runs from 1 April to 31 March, by submitting scheme proposals between 1 October and 31 December of the previous year. For each scheme the supplier must provide various details of the proposed scheme and the energy saving measures, including: whether the scheme is to provide measures for priority, non-priority domestic or non-priority non-domestic customers; the number and type of measures proposed; the funding required by the supplier from the Levy, and the costs to be met from customers and/or other third-parties. In order to estimate the expected lifetime savings, for domestic schemes, the supplier must also provide information on the mix of types of properties to which the measures are to be applied, e.g. the size of the properties and the nature of the existing heating systems and existing levels of insulation. Suppliers must also describe how they intend to direct measures to the intended customers.

It is assumed that suppliers will not undertake measures themselves and, instead, will contract with “measures providers” to carry out the work. Suppliers are required to describe how the measures providers are selected, e.g. whether through competitive tender or by some other means. Furthermore, it is assumed that suppliers will usually undertake schemes in conjunction with one or more project partners, as is in practice almost always the case. In the non-priority group, schemes are often undertaken with retailers and, in the case of subsidised energy efficient light bulbs¹³, for instance, with manufacturers. In the priority group, schemes are typically

¹³ Otherwise referred to as compact fluorescent lights or CFLs.

undertaken in partnership with bodies that have an interest and/or expertise in assisting particular target groups. A wide range of such organisations exists in Northern Ireland, including charities, voluntary and community organisations, health and social services organisations, housing associations and government departments. For each scheme proposal, suppliers are required to detail the partners involved.

In addition to the measures costs, suppliers are allowed to include “indirect costs” in their submissions. Indirect costs for a scheme include all of the management and administration costs associated with overseeing the programme, including design and development of projects, marketing, surveys and reporting. Indirect costs for both the supplier and for any third parties are limited in the Framework Document to a total of no more than 5%. Typically the indirect costs are those incurred by the measures providers, such as in surveying properties to determine the required energy savings measures. Particularly for the priority group, it seems that partner organisations generally have to fund their own indirect costs from other sources¹⁴.

2.5 Previous Reviews

Further to reviews of the EELP in 1999 and 2001, the Utility Regulator undertook a further review of the Levy arrangements in March 2006¹⁵. In addition to detailed points, more generally responses were split between those recommending an increase in the Levy and those that considered that any increase would place undue financial burden on customers, and between those that considered that the focus of the Levy should be switched purely to energy efficiency or carbon saving and those that considered the emphasis on alleviating fuel poverty should remain. A number of respondents commented that targets were too easy to meet and that incentives payments were too high.

Lastly, in November 2007, the Utility Regulator issued an open letter on the subject of Levy incentive payments, proposing a cap on incentives. Whilst some respondents supported the capping proposal, others suggested that caps would result in a reduction in the overall energy savings delivered by the scheme. The Utility Regulator has now included a provision to the current Framework Document to

¹⁴ Some partner agencies also provide advice to customers. It is perhaps unclear where advice is an indirect cost which is part of a “proven” energy efficiency measure, and thus compliant with the funding criteria, or where such advice is a self-contained energy efficiency measure, albeit an unproven one.

¹⁵ See Appendix B for a more detailed discussion of responses.

the effect that voluntary agreements will be sought from suppliers to ensure that any incentive earned in excess of 8% of total project costs will be recycled into energy efficiency and/or fuel poverty initiatives that are additional to work already planned.

3 Other Energy Efficiency Arrangements

3.1 Northern Ireland

The Levy is not the only source of funding in Northern Ireland for energy efficiency measures. Apart from energy efficiency measures householders or businesses may take of their own volition, there are a number of further Government sponsored or regulated initiatives.

3.1.1 Price Controls

A number of energy efficiency and fuel poverty schemes operate under the aegis of electricity and gas licences in Northern Ireland.

NIE Energy

Further to its price control obligations to deliver £16m present value lifetime energy savings over the period from 1st April 2000 to 31st March 2007, and to fund research at a cost of £150,000 on the targeting and implementation of energy efficiency savings in Northern Ireland, NIE Energy currently has obligations to deliver additional energy savings in the period 1 April 2007 to 31 March 2009. These obligations require NIE Energy to deliver a further £3m customer lifetime energy savings. These energy efficiency schemes must be additional to schemes carried out under the EELP, and NIE Energy is provided with additional revenues of £579,000 over the two year period to cover the costs of meeting the obligation.

NIE

Under the charge restriction conditions in its licence to participate in transmission, NIE's transmission and distribution business is required to establish a programme comprising projects specifically targeted at combating fuel poverty by assisting low income households to identify unclaimed social security benefits and facilitate the making of relevant claims to the Social Security Agency. NIE is required to make available funding of no less than £1m to cover the costs of establishing, implementing and running the programme over the period 2007 to 2010 inclusive.

Firmus Energy Distribution Limited and Phoenix Distribution Limited

As part of a package of measures designed to promote the development of an efficient, economic and co-ordinated gas industry in Northern Ireland, gas distribution

licensees in Northern Ireland have specific financial incentives associated with the connection of new domestic gas customers.

Switching from other fuels to gas is an effective measure for reducing carbon and currently for heating homes at lower cost.

3.1.2 DSD Warm Homes and other Initiatives

DSD provides funds of around £20m for two major programmes to improve energy efficiency and alleviate fuel poverty. The “Warm Homes” scheme targets energy efficiency measures at households who are in receipt of one or more specified benefits. Grants of up to £850 per home¹⁶ are available under the scheme.

“Warm Homes Plus” is a further scheme available to fund a more comprehensive package of heating and energy efficiency measures for owner occupiers who satisfy the eligibility criteria for Warm Homes grants and who are over 60 years old. Grants are limited by legislation to £4,300 per home. In some cases, this amount may be insufficient for the complete package of measures that must be completed in order to qualify for Warm Home Plus funding, and Levy funding has been used to supplement the DSD grant. As described earlier, and in view of the increases in funding for Warm Homes Plus from the DSD, including the increase in the maximum grant, this supplementary funding is being phased out, reducing from £1.6m in 2007/8 to £1m in 2008/9 and £0.5m in 2009/10.

The 2007 Inter-Departmental Group on Fuel Poverty Annual Report (the “2007 Annual Report”) published by DSD, reports that in 2006/2007 under the Warm Homes initiatives, 6,193 homes had insulation measures installed, 1,764 homes had heating measures installed, 2,406 homes had heating and insulation measures installed and 1,310 homes received energy efficient light bulbs resulting in 11,673 homes benefiting from the Warm Homes Schemes.

The 2007 Annual Report also reports that a Fuel Poverty Partnership Fund of £500,000 was divided out in 2007 among eleven partnership schemes across Northern Ireland and that other funders included, inter alia, Northern Ireland Electricity and EST¹⁷. Approximately £300,000 was divided out in 2006.

¹⁶ The Domestic Energy Efficiency Grants (Amendment) Regulations (Northern Ireland) 2008 increased this figure from the previous grant maximum of £750.

¹⁷ See Appendix D.

The 2007 Annual Report also refers to £1.25m of funding in the period 2006-2008 through the Environment and Renewable Energy Fund (EREF) to provide for the installation of 500 solar panels in fuel poor households.

3.1.3 Northern Ireland Housing Executive

The Northern Ireland Housing Executive (NIHE) promotes energy efficiency in a number of ways. First, as a major provider of social housing in Northern Ireland, NIHE is responsible for the general upkeep and improvement of its housing stock. Specifically in relation to energy efficiency, it has a programme of converting existing coal or electric heating systems to natural gas where available and to oil elsewhere. In addition, NIHE undertakes a range of measures, e.g. cavity wall insulation, loft insulation etc., aimed at improving the energy efficiency of its housing stock.

In its Home Energy Conservation Authority Report for 2007, NIHE states that it invested in excess of £20m on heating, insulation and double glazing in 2006/07, and that 4,550 heating conversions in Housing Executive stock took place in that year.

As the Home Energy Conservation Authority (HECA) for Northern Ireland, under the Home Energy Conservation Act (1995), NIHE is responsible for identifying measures that it considers practicable, cost-effective and likely to result in a significant improvement in the energy efficiency of residential accommodation in Northern Ireland. As part of discharging this responsibility, NIHE assesses the condition of the entire housing stock in Northern Ireland - public and private – typically at five yearly intervals. A House Condition Survey (HCS) was undertaken in each of 1996, 2001 and 2006, with an additional interim survey in 2004. Publication of the full results of the 2006 HCS is due imminently.

In addition to surveying the housing stock, to meet its HECA responsibilities NIHE goes further and seeks actively to improve the energy efficiency not only of its own housing stock but of private housing too. NIHE encourages owners to carry out energy efficiency works to their own dwellings where they can afford to do so. Where financial assistance is required it provides Housing Executive grants, as well as encouraging the uptake of grants from DSD and the Levy.

3.2 Great Britain

3.2.1 EESoP and EEC

Great Britain has had a succession of energy efficiency schemes associated with electricity and gas suppliers. The first scheme, the Energy Efficiency Standards of Performance (EESoP), was introduced in 1994 in England and Wales and a year later in Scotland. These Standards ran until March 1998 and gave obligations to each of the fourteen Public Electricity Suppliers (PESs) to achieve specified energy savings and the ability to fund them through a special revenue allowance equivalent to £1 per year per franchise customer. The aggregate target for the 14 PESs was 6,103GWh in accredited savings with a total funding allowance of £101.7m. The EESoP2 programme was subsequently launched for a two-year period from April 1998-March 2000 with an aggregate target of 2,713GWh and an allowance of £48.1m, again equivalent to £1 per year per franchise customer. In 2000, EESoP3 extended the arrangements for a further two years and to include gas suppliers and equivalent to £1.20 per year per customer, i.e. £1.20 for each gas *and* each electricity customer. The target savings were 4981GWh of electricity savings and 6144GWh of gas savings with costs of approximately £110m. Under EESoP1, the majority of customers assisted were disadvantaged whilst under EESoP2 and EESoP3, around two thirds of expenditure was focussed on disadvantaged customers¹⁸.

In April 2002, EESoP was superseded by the Energy Efficiency Commitment (EEC), which placed an obligation on large – defined as those having over 50,000 customers – suppliers of electricity and gas to achieve specified energy savings targets. Under EEC, at least 50% of savings were to be achieved from homes within the priority group, being households receiving certain income related benefits and tax credits. An overall target reduction of 62TWh was set by the Department for Environment, Food and Rural Affairs (DEFRA) over a three year period, with the overall target being apportioned to individual licensees by the Office of Gas and Electricity Markets (“Ofgem”) in relation to each supplier’s domestic customer numbers. The EEC2

¹⁸ See “A review of the Energy Efficiency Standards of Performance 1994 – 2002” Ofgem and EST, July 2003.

scheme operated from 2005/06 to 2007/08 with an overall target, again set by DEFRA, of 130TWh¹⁹.

Under both EEC1 and EEC2, schemes set up by suppliers did not necessarily have to benefit their own electricity or gas customers. Ofgem had in place procedures to assess suppliers' schemes and oversee progress and compliance. Schemes were approved if Ofgem was satisfied that they would lead to an improvement in energy efficiency.

Furthermore, under both EEC schemes, there was no explicit mechanism for recovery of costs by suppliers and consequently, allowed costs were not determined centrally. However, it has been estimated²⁰ that around £600m was required to meet the EEC1 target. EST estimates²¹ that EEC1 cost £3.60 per year for each gas and each electricity customer and EEC2 £9.00 per year for each gas and each electricity customer, equivalent to total costs of around £500m for EEC1 and £1,250m for EEC2.

3.2.2 Carbon Emissions Reduction Target (CERT)

From 2008, the Energy Efficiency Commitment has been replaced by the Carbon Emissions Reduction Target (CERT). Over the period 2008/9 to 2010/11, large gas and electricity suppliers – again those with over 50,000 domestic customers - in GB are required to achieve targets for reductions in carbon emissions generated by the domestic sector. As with EEC, suppliers are subject to an individual target which is set by Ofgem apportioning an overall DEFRA target pro-rata with each supplier's domestic customer numbers. The overall carbon emissions reduction target to be achieved collectively by all suppliers over the three years of the arrangement is 154 million tonne of CO₂. The cost of CERT to suppliers has been estimated²² to be £2.75 billion over the three years of the programme.

As with EEC, schemes set up by suppliers do not necessarily have to benefit their own electricity or gas customers, and a percentage of the target for each supplier must be achieved through low-income domestic consumers or those who are over 70

¹⁹ Note that the discount rate used to calculate lifetime savings for EEC2 was changed to 3.5% from the previous discount rate of 6%.

²⁰ See: "Evaluation of the Energy Efficiency Commitment 2002-05", report to DEFRA by Eoin Lees Energy, February 2006.

²¹ "Energy Efficiency Commitment 2005 - 2008 Briefing note", Energy Saving Trust, August 2007.

²² "Carbon Emissions Reduction Target (CERT) update", Energy Saving Trust, <http://www.energysavingtrust.org.uk/housingbuildings/localauthorities/newsitems/certupdate/>

years old. With the introduction of CERT this percentage has been reduced from 50% to 40%, albeit the overall size of the commitment has been increased.

3.2.3 Warm Front

The Warm Front scheme is the equivalent in England to Northern Ireland's version Warm Homes. Total funding for the Warm Front scheme in 2007/08 is £350m. The Home Energy Efficiency Scheme and Warm Deal are the equivalent schemes in Wales and Scotland.

3.3 Ireland

In April 2008 a new Home Energy Saving Scheme was initiated in Ireland that is intended to encourage and incentivise homeowners to improve the energy efficiency of their homes in order to reduce energy use and greenhouse gas emissions.

The scheme has an initial investment of €5 million and is a regional pilot designed to inform the roll-out of the full scale €100 million national scheme envisaged in the 2007 Programme for Government. The Scheme will target older housing as these homes are most in need of energy efficiency retrofitting. It will begin its work with 2,000 homes in the regional pilot. A Building Energy Rating (BER) assessor will give homes a BER rating and advise on the works that need to be carried out to improve energy efficiency. The homeowner will pre-pay €100 towards the cost of this assessment, with Sustainable Energy Ireland subsidising the balance.

The Scheme will be administered by Sustainable Energy Ireland (SEI) which estimates that householders will save up to €500 in their energy bills every year and that the scheme will save 6,000 tonnes of CO₂ in its first year. The full €100 million scheme is expected to yield greenhouse gas savings of 175,000 tonne per year.

A further scheme administered by SEI has been the "Greener Homes Scheme". This provides assistance to homeowners by covering the cost of installing renewable energy heating systems for either new or existing homes. Thus far, 22,000 homes have been assisted of which 49% have had solar heating installed, 26% heat pumps and 25% biomass. Support for new homes has now been removed in view of updated building regulations.

ESB sponsors a major awareness campaign, "The Power of One", promoting energy efficiency awareness.

3.4 Energy Services Directive

Directive 2006/32/EC of the European Parliament and the Council on energy end-use and energy services (the “Energy Services Directive” or “ESD”)²³ is aimed at continuing to “promote the supply side of energy services as well as creating stronger incentives for the demand side”. The Energy Services Directive requires Member States to adopt and aim to achieve an overall national indicative energy savings target of 9 % for the ninth year of application of the Directive, to be reached by way of energy services and other energy efficiency improvement measures. Member states are required to take cost-effective, practicable and reasonable measures designed to contribute towards achieving this target.

Member States may choose one of more requirements to be complied with by energy distributors, distribution system operators and/or energy sales companies, either directly or indirectly through other providers of energy services or energy efficiency improvement measures. These requirements are:

- (i) ensuring the provision of competitively-priced energy services, being services that must lead to a measurable or estimable energy efficiency improvement and/or energy saving,
- (ii) ensuring the availability and promotion to final customers of competitively-priced energy audits; and
- (iii) contributing to funds to subsidise the delivery of energy efficiency improvement measures. These shall include the promotion of energy auditing, financial instruments for energy savings and, where appropriate, improved metering and informative billing.

The ESD provides that funds, if established, may provide for grants, loans, financial guarantees and/or other types of financing that guarantee results. The funds shall be open to all providers of energy efficiency improvement measures, including energy distributors, distribution system operators, retail energy sales companies, independent energy advisers and installers.

²³ See Appendix E.

4 Issues with the Current EELP Arrangements

Since the inception of the EELP, the Framework Document has evolved to reflect the changing priorities of the EELP and to address issues that have arisen. However, a number of issues remain outstanding and warrant consideration in any reform of the arrangements.

4.1 High Level of Incentives

NIE Energy has been instrumental in the success of the EELP and, apart from a few schemes for non-priority non-domestic customers, has been the only supplier promoting energy efficiency measures. It has developed partnerships with a large number of organisations in the charitable, public and commercial sectors which have resulted in energy savings and fuel poverty measures far more extensive than was anticipated given the relatively limited funding of the Levy. Partially as a result of this success, the incentive payments suppliers have earned have been substantial.

Since the inception of EELP, on the Levy funding of £35m, incentive payments will have run²⁴ to over £7m and, in each of the scheme years 2005/6 to 2007/8, will have been 17%, 31% and 25% of measures funding (corresponding to 9%, 12% and 12% of the total, i.e. Levy plus third party funding plus incentive). In 2007/8, incentive payments to suppliers will have run to approximately £1.4m, which when added to measures funding of £5.91m, will have increased the total payments funded by the Levy to £7.3m, equivalent to £8.74 per customer or £3.37 on the average annual domestic electricity bill. Furthermore, these incentive payments are in addition to the funding of the measures themselves, including allowable indirect costs. Hence, the cost incurred by suppliers in earning these incentives consists only of any additional management time involved in securing third party funding and procuring measures at the least cost.

Nevertheless, some form of incentive has been necessary. Without the system of explicit incentive payments and without any real prospect of competition for funds, there would be little inducement for suppliers to procure measures costs at lowest cost and, using all of the available Levy funding, to do more than match the energy

²⁴ Incentive payments for 2007/8 have not yet been finalised, so figures for 2007/8 assume that the outturn energy savings are as per the estimates in the various scheme proposals.

savings targets²⁵. Conversely, with explicit incentives to exceed targets, suppliers benefit from obtaining the maximum possible energy savings for the available Levy funding. Whilst the cost to suppliers incurred in earning these incentives consists only of the management time, the same is not true of the measures providers. Assuming a given underlying measures cost, measures providers will lose directly when suppliers pay less for measures and, conversely, will benefit if suppliers pay more. The separation of measures providers from supplier is thus useful in giving both transparency of the costs of undertaking measures and in allowing the suppliers' incentives to be aligned with the interests of customers.

The same situation is not necessarily true, however, of the indirect costs of administration and management. Unlike measures, it is not practicable that all administration and management could be procured externally so as to provide transparency and to align incentives. Consequently, there will not be the same incentive to report minimised indirect costs, as the incentive on any additional energy savings that might be funded as a result of minimising administrative and management costs would be less than the reduction in costs necessary to earn the incentive²⁶. Hence, despite the fact that a fixed percentage cap will not accommodate the true variation in indirect costs between different schemes, a cap on indirect costs nonetheless is appropriate.

Notwithstanding the rationale for incentive arrangements where competition is lacking, it is questionable whether incentive payments of £1.4m are necessary in order to incentivise the effective expenditure of around £6m or even the raising of around £4m from third parties²⁷. The reasons for these incentive payments being high are both the targets arguably being too easily achieved and the rate of incentive payment being too high. Low targets have been due to the fact that:

- *Assumed Mix of Measures*: Targets have been set on an assumed mix of measures which contains fewer of the more cost-effective measures and more of the less cost-effective measures when compared to that which can be achieved in practice.

²⁵ Arguably, without clear penalties for under-delivery, the incentives to match, yet alone exceed, targets have been weak.

²⁶ e.g. reducing reported costs by £100 and spending the £100 on additional measures might result in an incentive payment of only £10.

²⁷ See figures for 2007/8 in Appendix F.

Perversely, by setting targets on an average mix, there should be an incentive on suppliers not to carry out any measure that is less cost-effective than the average for that group, as the energy saved will be less than the increase in the target. It should be expected thus that only a proportion of the assumed measures would be implemented and the Levy funds would be under-spent. In practice, sufficient schemes are typically submitted to cover all available Levy funds. This is due to the fact that the availability of relatively cost effective projects is greater than that assumed in target setting and that some of the schemes submitted are more expensive than the average used for target setting.

- *Assumed Fuel Mix:* An assumed fuel mix is used in setting the target energy savings that under-represents the savings that result from the mix of fuels actually displaced.

The high rates of incentive payments are due to:

- *Assumed Generation Mix:* As the generation mix in NI has become less carbon intensive, for instance, as a result of the commissioning of the combined cycle gas turbine at Coolkeeragh power station, so the carbon content of electricity will have decreased. The carbon content of other fuels will thus have increased in comparison, so that any non-electricity energy savings will be greater when expressed in terms of GWh of electricity equivalent. Consequently, as the generation mix has become less carbon intensive, any given non-electricity energy savings will have attracted increased incentive payments.

Note also that, as of the introduction of the all-island Single Electricity Market on 1 November 2007, it may be more appropriate to use an all-island generation mix. The carbon intensity of this is lower again and thus incentive payments would increase further unless a corresponding adjustment is made to the £/GWh incentive.

- *Discount Rate:* With effect from 2008/9, the discount rate used in the calculation of lifetime savings has been changed to 3.5% from the previous figure of 6.5%. Using the lower discount rate, future energy savings are discounted by a smaller amount and hence discounted savings over the lifetime of any given measure will be higher than with the previous rate. For a measure lifetime of 20 years, say, the effect is equivalent to approximately a 29% increase in the incentive £5120/GWh to an equivalent of £6,600/MWh.

The rationale for the original choice of £4000/GWh is not entirely clear. Suggestions include a view of the reasonable profit for an energy services company or that it represents an estimate of the lost profit from the sale of night storage heaters²⁸, which were more prevalent at the start of EELP. At the original rate of 0.4p/kWh, the incentive payment was more than the cost today of undertaking some measures. Thus, even at this rate, it would be profitable for suppliers to fund further measures from incentive payments in order to earn further incentive payments, and perhaps only the 20% minimum Levy funding requirement prevents this from happening. Whatever the original rationale, indexing by inflation has increased the actual incentive rate by 31% and the effect of changes in generation mix and discount rate have increased the effective rate by another 51%, to give a combined increase of around 98%.

4.2 Leveraging using Public Funds

Generally suppliers are credited with all of the energy savings from a scheme and hence the incentive payments from exceeding targets that may result. However, where a scheme is funded jointly between the Levy and another publicly funded energy efficiency programme then the savings are apportioned between the two programmes. In particular, in the case of Warm Homes Plus where Levy funding is used to supplement the principal funding from the DSD, only a proportion of the energy savings of the measures installed in each home counts towards the supplier's accredited energy savings.

Although it may be relatively straightforward to identify the source of money such as that made available by the DSD or NIHE, in other cases it may be more difficult to determine the provenance of funding, particularly when the funds have been passed through one or more partner organisations that are funded from multiple sources. Consequently there may be circumstances in which the supplier is gaining incentive payments, perhaps even without its knowledge, from efficiency savings delivered through use of other public funding.

Furthermore, other schemes in which the supplier has been credited with 100% of the energy savings have included schemes that switch customers to mains gas. This is despite the fact that the partner organisations, the gas distributors, are also being

²⁸ "Competition for the poor. Liberalisation of electricity supply and fuel poverty: lessons from Great Britain for Northern Ireland. A report for the Director General of Electricity Supply (Northern Ireland)", Brenda Boardman and Tina Fawcett, Environmental Change Institute, University of Oxford, 2002.

given incentives under their price controls to implement the same measure. The Utility Regulator has been considering amending the Framework Document requiring such savings to be shared, as with Warm Homes Plus. Given such a change, a consequence may be that the supplier will prefer to promote other schemes of its own that would offer greater savings exclusively to the supplier rather than a partial share of a scheme partnered with gas distributors. However, combined with the savings that result from gas distributors continuing to react to their own incentives, this may give an outcome that is more beneficial overall.

Nevertheless, there may be some schemes where the situation is less clear. For instance, partner funding for some schemes has come from health authorities that have seen value in the health benefits from improved home heating. Whilst the supplier may have brought funding under the umbrella of the EELP, it seems questionable whether it is appropriate that a private company should earn significant incentive payments as a consequence of the spending decisions of public bodies.

4.3 Competition for Funding

Although there are several supply licensees in Northern Ireland, few have a significant market share. In particular, only NIE Energy supplies domestic customers. Whilst it is not a requirement of the EELP that energy efficiency measures are undertaken by the supplier of the customer, it would appear that suppliers regard offering subsidised energy efficiency measures as a form of marketing. It is probably for this reason, combined with the fact that 90% of the Levy funding is reserved for measures for domestic customers, that the vast majority of funding applications are from NIE Energy.

At least in the 90% domestic sector, NIE Energy consequently has a de facto monopoly of Levy funding. For the domestic groups, NIE Energy thus understandably submits only sufficient schemes to employ the available Levy funding, with possibly one or two reserve schemes, should another scheme have to be withdrawn for any reason. The result is that, while there is a substantive role in administering the EELP, for the domestic sector, the Utility Regulator/EST's process for inviting, evaluating and approving schemes in essence merely endorses schemes put forward by NIE Energy. The real competition for funds occurs in the process run by NIE Energy, whereby NIE Energy invites proposals from potential scheme partners to access the funding it alone receives from the Levy. It is perhaps

unsurprising that the EELP arrangements are widely referred to as the “NIE Energy Efficiency Programme”. Especially in view of the importance that suppliers seem to attach to the branding of schemes they manage, a concern is thus that the EELP may be reinforcing NIE Energy’s de facto monopoly in domestic supply.

Any party with a monopoly, particularly when combined with a lack of any binding obligation, will be in a strong position. In contrast, were there to be several suppliers actively seeking to commission energy saving measures, then competition for funds might be sufficient to encourage suppliers to submit cost-effective scheme proposals. At least in principle, the need for explicit incentives would be removed. Nor, in principle, would controls on indirect costs or total transparency of measures costs be necessary, as schemes that did not minimise these costs would lose out to competing schemes that did.

In this context, the wide variation in the cost-effectiveness of schemes warrants comment. It is perhaps counter-intuitive that, in any given year, funding for less cost-effective measures is secured alongside more cost-effective measures, when the opportunity to undertake more of the more cost-effective measures is found the following year. For example, given that the most cost-effective measures are typically the supply of CFLs and the installation of cavity wall and loft insulation, it might be expected that, apart from any deliberate initiatives to diversify funding towards innovative measures, funding would be entirely given over to these measures until all opportunities had been exhausted; only then would funding be diverted to the next most cost-effective measures. However, this is not what is seen in practice. In each year more expensive measures such as heating controls or loft insulation top-up are funded alongside insulation and CFLs.

Whilst the ring-fencing of funds for specific measures such as whole house solutions would be expected to result in the measures of different cost-effectiveness as between the ring-fenced groups, this does not explain the effect within each group. Reasons for this apparent inefficiency could include:

- (i) there may be “market inertia”, i.e. there may be a rate at which opportunities to undertake the cost-effective measures become available, dependent on the rate at which even subsidised customers decide to invest in energy efficiency. At any given time, it could be more expensive to find further

customers for the most cost-effective measures than the limitation on indirect costs allows;

- (ii) although perhaps more relevant to the commercial group, there could be side benefits for suppliers, e.g. in terms of marketing, to more expensive schemes, such that these benefits outweigh any loss of incentive payment; and
- (iii) generally, wherever there is a lack of competition, regulated companies may choose not to exploit their market power to the maximum extent possible for fear of prompting regulatory intervention. In the case of the EELP, overly generous incentive payments may, perversely, discourage the maximum number of the most cost-effective measures being undertaken in any given year.

4.4 Fuel Poverty

Fuel poverty, being a measure of the proportion of a household's income that needs to be spent on heating the home to an acceptable standard, can arise due to any combination of low income, high fuel prices and low energy efficiency. Providing that the cost of implementing measures is outweighed by the reduction in heating bills, energy efficiency will be more cost effective in reducing fuel poverty than either fuel price reductions or supplementing incomes.

However, without access to income data and detailed information about the energy efficiency of individual dwellings, fuel poverty is hard to measure, and it is difficult to target measures so as to minimise fuel poverty. Instead, the EELP seeks to use eligibility criteria which are considered to be reasonable indicators of the susceptibility to fuel poverty. Within these constraints, the incentive remains to maximise energy savings, which will also minimise fuel poverty for the eligible customers.

The Framework Document further stipulates that the greater proportion of Levy funding should be put towards "whole house solutions", in which a complete package of measures is provided, including new heating systems - gas-fired where available but otherwise oil - together with insulation measures as required, such as loft and cavity wall insulation, hot water system lagging and draft-proofing. These packages of measures are expensive and, as a consequence, the number of homes that can

be targeted each year, given current levels of funding, can be no more than a few hundred.

It is recognised that there will be cases of fuel poverty that cannot be helped without the installation of a new heating system, a home with no existing heating being an obvious case in point. It may seem perverse to install an efficient heating system to an inadequately insulated home, and there may be economies of scope, particularly in respect of the costs of surveying one property rather than several, when fitting several measures to a single property. However, it could be more cost-effective both in terms of energy saving and of reducing fuel poverty by the greatest degree to take insulation measures on a different fuel poor home with less efficient heating.

The concentration of these measures on a relatively small number of households means that there are likely to be other fuel poor households that are given no assistance at all. Rather than aiming to “fuel poverty proof” homes, such that the households will then be immune to fuel poverty, an aspiration which seems increasingly difficult to attain even in energy efficient homes in view of recent increases in fuel prices, it might be more effective to spread measures over a larger number of homes with a view to levelling up the situation of the most fuel poor, or maximising the energy efficiency savings in fuel poor homes²⁹. Indeed, it has been suggested that the eligibility criteria themselves may be too restrictive, such that additional measures may be being directed at households that have received measures already, whilst there are other households that fall outside the eligibility criteria but who may be fuel poor.

There are also reports that oil-fired heating systems are being installed which householders cannot afford to run due to the high upfront cost of a tank of oil. These householders may continue to use less efficient forms of heating, such as open fires, merely because the fuel can be purchased in small and therefore affordable quantities. Renewable generation has been suggested as a means of alleviating fuel poverty as the running costs are low. However, whilst the running costs may be low, the capital costs of renewable generation typically are high. A more conventional solution, even with higher running costs but with lower capital costs could be a more

²⁹ There have been favourable views expressed regarding projects that target a whole neighbourhood with comprehensive energy savings measures, both in terms of the measures undertaken and the awareness generated. However, if such initiatives are genuinely more cost-effective, this should be apparent from the cost-effectiveness of such schemes. Likewise, generating awareness should manifest itself in reducing the indirect costs involved in identifying customers eligible for assistance.

cost effective solution overall. However, there has been an implicit assumption that capital costs can be subsidised whereas running costs cannot. It may be appropriate thus to extend the scope of allowable measures to include soft loans, or other means to assist the purchase of fuel.

4.5 Other Issues

4.5.1 Under-delivery

The arrangements, as defined in the Framework Document, lack clarity in a few places. For instance, it is unclear what should happen if a scheme were to under-perform. Under-performance could take the form of: under-spending schemes which complete measures at the proposed cost-effectiveness or better, but complete fewer measures than proposed leaving surplus Levy funds; or over-spending schemes which complete measures less cost-effectively than proposed and hence risk completing fewer measures than proposed with the Levy funding awarded.

The Framework Document is not explicit in providing for these circumstances as they have rarely arisen. Where they have, it is understood that the supplier has always been reimbursed for the costs actually incurred. In the case of under-spending schemes, surplus funds have been diverted onto other schemes or held over for schemes in the following year. In the case of over-spending schemes, providing the underperformance is identified soon enough, the scheme is suspended and funds again diverted onto other schemes or held over for the following year.

4.5.2 Additionality

It is questionable whether the additionality criterion of requiring the Levy funding be no less than 20% is effective. First, it could preclude schemes that have secured substantial third party funding but genuinely are unable to proceed without some minimal assistance from the Levy. Secondly, the limitation can presumably be sidestepped simply by inviting third parties to contribute less to a scheme. On the plus side, the criterion may prevent suppliers from making de minimis contributions to schemes from the Levy and then claiming the entirety of the energy savings on which substantial incentive payments are then due.

It is also questionable whether some measures are such that they can continue to be considered as additional. For instance, CFLs are becoming sufficiently commonplace that it is becoming likely that the subsidised sale of a CFL is merely

displacing a sale that would have taken place in any case³⁰. This is a case of where the EELP (and the equivalent schemes in GB) can be said to have contributed to a market transformation. Nevertheless, the now reduced additionality needs to be recognised either explicitly in the scheme evaluation or implicitly by reduced standardised estimates for the measures.

4.5.3 Transparency

As mentioned earlier, branding by suppliers could, in some cases, be reinforcing the market share of already dominant players. In other cases, any value that suppliers can realise by using energy saving measures to build customer relationships may, on the one hand, be beneficial in encouraging further energy savings. On the other hand, it has been suggested that lack of transparency concerning the ultimate source of funds, i.e. that measures have ultimately been underwritten by the Northern Ireland electricity customer, and not by suppliers themselves, is inherently undesirable.

³⁰ This is an example of so-called “deadweight”.

5 Developing a Revised Energy Efficiency Levy Programme

5.1 Market Failures

All projects funded under the EELP have a payback, and measures can have payback periods as short as two years. Indeed, a requirement of the Framework Document is that any project is in the interests of the Northern Ireland customer, meaning that the benefits in financial terms outweigh the costs. On this basis, any rational customer should undertake these measures of their own volition. However, as has been noted previously³¹, there are a number of market failures, including:

- *budget constraints*: particularly in the case of the fuel poor, some customers may not be able to afford the up-front costs of energy efficiency measures, notwithstanding that there will be a cost saving in the longer term;
- *information asymmetry*: customers may be deterred by their inability to assess whether installers of measures are reputable and will undertake work to a satisfactory standard. Also, without adequate information regarding their levels of energy consumption, customers may find it difficult to assess the possible return and thus justify investment in energy efficiency measures;
- *uncertainty*: customers may face uncertainty as to the level of future energy prices;
- *split incentives*: typically, landlords will seek to under-invest in energy efficiency measures because the tenant enjoys the benefits, and the advantage to the tenant of high energy efficiency is unlikely to be reflected in rent. Similarly, owner-occupiers may under-invest if they perceive that subsequent owners will enjoy a substantial proportion of the benefits, whilst high energy efficiency is not properly reflected in property sale prices.

Although there may be scope for other approaches, such as building regulations and providing improved information and education, the presence of these market failures suggest that an energy efficiency programme can be justified whereby investment decisions are largely taken on customers' behalf. An energy efficiency programme should be able to take decisions that are rational for customers collectively such that,

³¹ See for instance, "Evaluation of Supplier Obligation Policy Options. Report for DTI and Defra", NERA, February 2007.

in spite of the Levy, overall energy bills are reduced as a consequence of lower consumption. The cost is that there will be a redistribution of costs between customers, in that all customers will contribute to the Levy, whereas benefits will accrue to those receiving energy efficiency measures.

5.2 Opening up to Competition

Given the de facto monopoly that NIE Energy has, at least over the 90% of the Levy funds ring-fenced for domestic customers, the EELP arrangements have substituted the market failures on the demand-side for energy efficiency measures with a market failure on the supply-side, i.e. that of creating a monopoly in the provision of energy efficiency measures. Thus, despite NIE Energy's success in promoting energy efficiency measures in Northern Ireland, other organisations may be just as well-placed, or possibly even better placed. In particular, agencies that currently partner with NIE Energy may be equally well-placed to apply directly for Levy funds and to seek additional third-party funding to improve the cost-effectiveness of their proposed schemes (and earn the resulting incentive payments). Nor is it clear that only NIE Energy can assure the quality of measures undertaken on customers' behalf. The Northern Ireland Energy Advice Centre, for example, currently maintains lists of suitably qualified installers, and many charities will be able to protect the interests of vulnerable customers.

Potentially, competition for Levy funding would also remove the need for incentive payments and also for rules on indirect costs. In principle, any proposed scheme that failed to minimise measures and indirect costs and/or failed to maximise contributions from customers or other third parties would be rejected in favour of other schemes that did. In principle, the assessment of competing schemes against the criterion of cost-effectiveness would thus also remove the need for detailed scrutiny of such costs.

Consequently, whilst NIE Energy may have been successful in using Levy funds to promote energy savings and fuel poverty alleviation measures, there seems to be no reason why other organisations, other than just other electricity suppliers, should not be given the opportunity to demonstrate that they also can be equally successful. Therefore there seems to be no reason why Levy funding for schemes should not be made available to organisations other than electricity suppliers.

Certain restrictions would be required. For instance, it is not the intention that proposed schemes could be submitted by individual householders. A large number of applicants, all acting purely in their own interests, would create excessive overhead costs, not only because of the potentially large numbers, but also in the approval and subsequent monitoring that would be required for each scheme. The minimum size for schemes will depend on the balance between the greater administrative burden of a large number of smaller schemes and the potential exclusion of high quality schemes if the minimum eligible size is set too large. A minimum grant of, say, £10,000 might be appropriate, although it might be more appropriate to express the limit as a minimum energy saving for each of the funding categories. A response to the March 2006 consultation suggested that, with a smaller number of larger schemes, the schemes would be more efficient (presumably because administrative costs would tend to be proportionately lower for larger schemes). This may also be the case, although it might be expected that this would be revealed in the evaluation of the scheme proposals, with larger schemes tending to be more cost-effective, without the need to impose an explicit limit.

As discussed earlier, with perfect competition for Levy funding, explicit incentives, transparency of measures costs and limits on indirect costs would not be required. Applicants would be able to bid schemes purely on the basis of the value for money offered, and the competition for Levy funding would ensure that underlying costs were kept to a minimum and would prevent more than normal profits being made on activities. However, a major concern is whether or how quickly an adequate degree of competition for Levy funding might develop. It would not help the aims of the EELP if incentives and controls were abolished with the result that the existing suppliers did not continue to invest the same effort as they do currently, whilst few other scheme proposals came forward and those that did applied for excessive funds for the measures proposed.

It would be prudent thus to keep features of the existing scheme until experience is gained of the degree of interest in bidding for Levy funding from non-supplier organisations. These include:

- (i) the incentive payment arrangement to encourage schemes to maximise the energy savings measures obtained for Levy funding;
- (ii) the requirement to provide transparency of the costs of measures;

(iii) controls on the level of management and administrative expenses.

As with the existing EELP arrangements, schemes would be required to use recognised contractors to provide assurance that the installation of measures is undertaken to relevant standards.

Unless there is a clear separation and an auditable contract between scheme sponsor and measure provider, the scheme sponsor and measure provider may be in a position to pad the measures costs whilst, if there is insufficient competition for funds, still offering a cost-effectiveness that compares favourably with the marginal scheme. Maintaining transparency of measures costs would be best served by preventing measures providers from themselves bidding to receive Levy funding directly, and by requiring scheme sponsors to give assurances that they were adequately independent from the measures provider. However, preventing measures providers from bidding for Levy funding directly may inhibit the degree of competition for funding. The Utility Regulator should seek views as to whether measures providers should be allowed to bid directly and views as to whether controls and monitoring could compensate for the loss of transparency and prevent the inflation of measures costs.

In the case of indirect costs, whilst a cap could be retained, it could perhaps be made more accommodating of the typically higher percentage indirect costs associated with cheaper measures (which, as is the case for individual insulation measures, can be the most cost-effective). In Great Britain, DEFRA assumes that indirect costs take the form,

$$\text{Indirect Cost} = (\text{£}250 * \text{Measure Cost}) / (\text{£}1000 + \text{Measure Cost})$$

Thus, for the cheapest individual measures the indirect costs are 25% of the measures cost, whilst for large measures costs the indirect costs are £250 per measure. For a measure cost of £500, say, the indirect costs would be 16.6%, decreasing to 5% for a measure cost of £4000. Whilst DEFRA used this assumption purely for an impact assessment of the CERT arrangements, the cap on indirect costs in EELP could use the same or a similar formula. Views should be sought as to the appropriate form and level of the cap to ensure that, whilst the allowance for indirect costs is realistic, the maximum funds are available to be spent on measures.

5.3 Incentive Rates

The level of incentive payments appears to be higher than should be necessary in order to elicit further energy saving schemes. Even the original incentive rate in 1997/8 of 0.4p/kWh is higher than the cost-effectiveness of some current insulation schemes, and the incentive payment is not a payment from which schemes must be funded but an additional payment over and above the costs of carrying out and managing schemes.

As discussed in Section 4, since 1997/8 indexing by inflation has taken the incentive payment rate from £4000/GWh to £5120/GWh for 2008/9. Changes in generation mix and discount rate mean that, in carbon terms, a given energy saving measure results in 51% more accredited GWh savings than it would have done in 1997/8. On this basis the rate of £5120/GWh would need to be reduced to approximately £3460/GWh. However, for the first year, the incentive rate should be reduced further to £1000/GWh, whilst experience of the extent of competition for funds can be assessed. The resulting reduction in incentive payments should be used to increase the funding available for measures.

An alternative to setting a fixed, albeit reduced, incentive rate would be to allow scheme proposals to bid in an incentive rate. The incentive rate, together with the cost-effectiveness of the proposed measures, could be considered together in evaluating schemes. To guard against a possible lack of competition, at least until competition for funds had been established, the specified incentive rate could be capped at £1000/GWh.

As regards under-delivery, there may be a tacit incentive on licensed suppliers, and particularly on NIE Energy given it is so closely associated with the EELP, to achieve or exceed the proposed performance for any given scheme, but this discipline may be less powerful for non-licensed bidders, who are not subject to regulation. To discourage under-delivery, the minimum penalty should be that Levy funding released is pro-rated by the energy savings actually achieved. Anything less and it would be profitable to bid for Levy funding, with no intention of delivering, on the basis that not all of the funding awarded would have to be paid back as a penalty. More severe might be that the penalty would be related to the cost-effectiveness of the cheapest rejected scheme, on the basis that this would represent the cost of making good the shortfall. Another more severe penalty would be to withhold Levy

funding unless the claimed energy savings were achieved, with any excess costs being underwritten at the project partners' expense. The expected cost of penalties would be paid for out of the expected revenues from incentives. It should be recognised that the greater any such penalties are, the greater the risks associated with submitting a scheme, particularly if the targets for success are set are reasonably challenging. The risk of being subjected to some form of penalty may deter some potential applicants, particularly non-profit making enterprises. Nevertheless, some mechanism for ensuring that schemes are delivered, if only the pro-rating by the energy savings achieved, is required.

5.4 Targets

More realistic targets can be set by ensuring that the assumptions regarding the mix of measures, the fuel mix and third party funding are more realistic of actual outturns. However, as discussed in Section 4, targets based on accurate assumptions but set at the average cost-effectiveness would result in the less cost-effective of the assumed measures not being submitted. It is only because the assumptions regarding the cost-effectiveness of measures used in setting the targets are unrealistic that sufficient measures are delivered that will employ all of the available funding.

Thus, either:

- (1) the target can be based on the *least* (rather than the average) cost-effective of a realistic set of assumed measures, i.e. the marginal cost-effectiveness of the group; or
- (2) the target can be based on the cost-effectiveness of the scheme actually proposed.

The disadvantage of (1) is that "windfall" incentive payments are earned on any measure that is more cost-effective than the marginal measure. However, this effect is not likely to be any worse than the situation under the current EELP, except to the extent that suppliers may currently feel obliged to undertake some schemes that do not enhance their incentive payments whereas, in a more competitive setting, they may feel less so inclined. The disadvantage of (2) is that it does not create an incentive to submit the most cost-effective schemes (as these are the yardstick against which outturn performance will be measured) except to the extent that

competition for Levy funding requires proposals to be cost-effective in order to have a chance of being selected. Alternatively, a hybrid approach could be adopted whereby the contribution of a scheme to the target is based on a combination of the cost-effectiveness of the least cost-effective scheme and the cost-effectiveness of the particular scheme. By this method, the windfall of (1) would be reduced.

For the first year, the contribution to the target for each group of a scheme could be based on an average of (i) the marginal cost-effectiveness of the group and (ii) the cost-effectiveness of the scheme. There would be a risk of the marginal scheme being far less cost-effective than the majority of schemes in the group. Schemes with such outlying costs could be excluded from the calculation of the target cost-effectiveness and their target based solely on cost-effectiveness of the scheme.

Setting more realistic targets would further reduce incentive payments without even lowering the incentive effect, as the incentive at the margin would not be affected. As with the reduction in incentive rates, the reduction in incentive payments should be used to provide additional funding for measures.

5.5 The Scope for Energy Savings Measures and Size of the Levy

In principle, a reasonable aim of the EELP could be to undertake, albeit acting collectively, all projects that rational customers ought to undertake individually, i.e. where the benefits outweigh the costs and the projects thus have a positive NPV. It could also be the aim to deliver all such projects as quickly as possible, so that the benefits can be realised as soon as possible.

However, a commitment to fund all positive NPV projects would not provide competitive pressure on scheme costs. With limited funds, competition between proposed schemes would ensure that measures were provided at reasonable cost with maximum third party contributions. On the other hand, if scheme sponsors knew that, provided the positive NPV criterion were met, the scheme would be funded then there would be little incentive, except for the very marginal schemes, to minimise installation and administration costs. Furthermore, if there were no scrutiny of costs, scheme sponsors could take the surplus of benefits over costs as pure profit. This outcome would involve considerable redistribution of funds from customers as a whole to customers as individuals.

Hence the objective of funding all positive NPV projects as early as possible, with scheme sponsors being able to bid value, would not seem to be desirable. In a market with no market failures, where customers took rational decisions without budget constraints, customers would receive the benefits of the measure and bear the cost plus a reasonable level of profit, whilst measure providers would receive cost plus a reasonable level of profit. Thus an outcome as close to this as possible, with minimum funding by the EELP, would be the ideal. This aim may be best achieved by limiting funds and retaining the incentive mechanism with continued transparency of measures costs.

According to the 2007 HECA Report there was a 17.2% improvement in the energy efficiency of the overall Northern Ireland housing stock between 1994 and 2004. Further findings of the report, based on preliminary analysis of the 2006 House Condition Survey, are that as of 2006:

- 98.2% of dwellings had full central heating;
- the percentage of dwellings with no wall insulation had dropped to 22.2%. Many of those with no wall insulation were of solid wall construction and therefore incapable of availing of the traditional and cost effective remedy, cavity wall insulation. The alternatives, dry lining or external insulation tend to be much more expensive;
- 86% of dwellings had either full or partial double-glazing, with only 14% of the housing stock remaining with single glazing;
- over 85% of dwellings had loft insulation, 10% did not have lofts, and the majority of the remaining 5% were vacant dwellings unlikely to be brought back into use.

From this preliminary analysis it would thus seem that the scope for further measures is limited. However, according to the 2004 Interim House Condition Survey, of the 97.3% of homes then with central heating, 46,600 homes (6.9%) had electric central heating systems and a further 43,000 homes (6.3%) had central heating that was solid fuelled. Thus, in 2004, there were still around 100,000 homes with heating systems that would benefit from energy efficiency measures and that would qualify for replacement under the EELP if the homes were vulnerable.

Furthermore, the June 2008 Northern Visions report cites housing as making up the biggest proportion of the Northern Ireland carbon footprint and states that a 29%

reduction by 2025 relative to 2003 levels can be achieved in a “Retrofit 2018” scenario achieved through retrofitting measures over the period 2008 to 2018 based on current technology, consisting of loft and cavity wall insulation, double glazing and gas-fired heating where the gas network permits.

The Northern Visions report thus suggests the scope for further measures is substantial, whilst the 2004 House Condition Survey also suggests there is considerable scope for heating measures, although less so for insulation measures. Detailed analysis of the full 2006 House Condition Survey, due to be published imminently, will be required to ascertain the full scope for further measures. Pending this analysis, the Utility Regulator should seek views as to the scope for further measures. In the absence of further information, total Levy funding, that is funding for measures plus incentive payments combined, should be retained at current levels. Greater competition for Levy funding from a wider range of organisations should reveal the true scope for cost-effective measures, whilst at the same time continuing to secure reasonable degrees of contributions from those benefiting from the measures. If the most cost-effective schemes, consistent with the scope suggested by the latest HCS data, are being submitted, this will suggest that the EELP arrangements are working effectively and that Levy funding could be increased without loss of efficiency.

A recent report by McKinsey³² suggests that, worldwide, \$170bn could be invested annually from now until 2020 to deliver up to half the emissions abatement required to cap the long-term concentration of atmospheric greenhouse gases at 450 parts per million. It states that the average internal rate of return for such projects would be 17%, with total annual energy savings being roughly \$900bn per year by 2020. Of the \$170bn, \$40bn could be spent in the residential sector and, of this, more efficient heating and cooling systems account for 76% of the costs but only 37% of the savings, whereas energy efficient lighting and more efficient appliances can account for 53% of the savings but only 4% of the costs. Similar measures are identified within the commercial sector where \$22bn a year could be invested. In the industrial sector \$80bn could be invested annually, with measures including combined heat and power and more energy efficient motor-drives.

³² “The Case for Investing in Energy Productivity”, McKinsey Global Institute, February 2008.

Whilst increasing the Levy would increase the burden on customers individually, including for the fuel poor, the energy savings would be correspondingly higher. Thus, given that all measures are required to have positive NPV, a higher Levy would result in higher net collective benefits, including higher net collective benefits for the fuel poor.

5.6 Emphasis on Fuel Poverty

Further analysis, particularly of the 2006 HCS data, should also reveal the scope for energy efficiency measures to further alleviate fuel poverty.

If the aim of the EELP is that all positive NPV measures should eventually be taken, then the emphasis given now to fuel poverty is more an issue of the order in which measures are implemented rather than which measures are implemented. By the same reasoning, the more expensive whole house solutions, will be undertaken at some juncture, and the emphasis accorded to them in the EELP in the next few years will determine whether these more expensive measures are completed after or in parallel with more cost-effective insulation measures. The faster it is intended that all positive NPV measures are completed, the less critical the order in which measures are implemented and hence the less important the emphasis on fuel poverty, as it would be expected that all measures would be completed in relatively short time.

Nevertheless, in the interests of alleviating fuel poverty as quickly as possible, it is possible that a lesser emphasis on whole house solutions could allow the delivery of greater reductions in fuel poverty by targeting insulation measures on homes with less efficient heating systems rather than those that have been newly installed. It might also be more effective to spread measures over a larger number of homes with a view to levelling up the most fuel poor. As discussed in Section 4, it should be considered also whether wider measures such as the assistance with the upfront purchase costs of oil to allow householders to run high-efficiency oil-fired heating systems is warranted. In effect, a tank of fuel oil can be regarded as an energy efficiency measure albeit with a life-time of maybe only a year. However, were such measures to be funded, it is not the intention this funding should go any further than necessary to give effect to the energy efficiency measure, i.e. the replacement of low efficiency heating, and not that the Levy should be used purely as a subsidy for fuel purchase. The Utility Regulator may wish to seek views as to how this distinction could be drawn.

Whilst the 2006 House Condition Survey should provide data that will help determine the emphasis that should be placed on fuel poverty measures, the Utility Regulator may also wish to seek views on this issue.

As regards the idea of splitting the Levy fund into separate fuel poverty and energy efficiency components with independent objectives, providing Levy funds continue to be used for the alleviation of fuel poverty only through energy efficiency measures and not to supplement incomes or purely to subsidise fuel costs, then the objectives will remain well-aligned. Consequently the division of the Levy into separate funds may not be necessary or even desirable.

Finally, it should be recognised that a number of other initiatives aimed at addressing fuel poverty are currently being explored, in particular through the Fuel Poverty Task Force by a number of organisations, including the Utility Regulator. A clearer view of these initiatives should emerge over the duration of the Utility Regulator's consultation on the EELP and this, too, may inform the emphasis to be placed on fuel poverty in the EELP arrangements.

5.7 Non-Priority Funding

Whilst the emphasis on priority funding is a matter of the emphasis to be put on the alleviation of fuel poverty, the rationale for the segregation of non-priority funding into domestic and non-domestic groups is less clear. Whilst there may be an argument of equitability, i.e. that both groups contribute to the Levy fund so that both should benefit to some extent, the EELP inevitably involves redistribution. On this basis, and in the interests of maximising the effectiveness of the EELP in delivering energy efficiency savings, the segregation into non-priority domestic and non-priority non-domestic groups ought to be discontinued.

Given that non-domestic schemes tend to have higher cost-effectiveness, a possible consequence of abolishing the split between non-priority domestic and non-priority non-domestic groups could be that non-priority domestic schemes would no longer receive significant funding. Nevertheless, the benefit should be higher energy savings for the Levy funding available and, arguably, the imbalance between benefits and costs of the Levy to the non-domestic group would be partially redressed. Furthermore, if the ultimate aim of the EELP is to fund all positive NPV schemes, less cost-effective but still viable non-priority domestic schemes should eventually be undertaken with support from Levy funds.

The Utility Regulator should seek views on ending the segregation of Levy funds between non-priority domestic and non-priority non-domestic customers.

5.8 Expanding the Scheme to Gas

The current Levy is paid only by electricity consumers and the question of whether the arrangements should be extended to gas consumers arises.

Because the existing EELP is charged on consumption of electricity, it may be argued that electricity consumers are already cross-subsidising those with gas or oil heating. It is not immediately apparent why electricity customers cross-subsidising other electricity customers or electricity customers cross-subsidising oil and gas customers is any more reasonable than gas customers cross-subsidising other gas customers or customers with electricity or oil.

More practically, however, the Utility Regulator is under a statutory duty to promote the development of the gas industry in Northern Ireland. Furthermore, from the perspective of energy efficiency and carbon reduction, whilst both gas and oil are preferred to electricity as a means of heating, gas is preferred to oil. Thus while a levy on electricity but not gas and oil may be justified, a levy on gas but not oil might be regarded as perverse. Thus, whilst noting that the only form of heating currently contributing to the Levy is electrical heating, without an effective means of extending the Levy to oil, it would seem inappropriate to extend the Levy to gas.

5.9 Carbon-reflective Charging

A further way in which the Levy might contribute to reducing carbon emissions would be to change the way in which the Levy is charged from simple kWh to some other charging base that is more reflective of carbon use. Whilst ideally this might involve charging users of all fuel types, as discussed above, without an effective means of extending the Levy to oil, the Levy should continue to be charged on electricity alone. However, electricity suppliers could still be charged on the basis of the fuel mix, perhaps on the basis of the data that will be used for fuel mix disclosure; suppliers supporting lower carbon generation would pay proportionately less per kWh. The same principle could be achieved by charging the Levy on generation rather than supply, whereby it would be even more straightforward to charge on the basis of the carbon emissions associated with different fuel types. However, in the context of the

all-island market, charging generation rather than supply would probably need to be accompanied by the introduction of an all-island EELP.

5.10 Energy Services Directive

The Energy Services Directive requires Member States to adopt and aim to achieve an overall national indicative energy savings target of 9 % for the ninth year of application of the Directive, to be reached by way of energy services and other energy efficiency improvement measures.

The reductions counted in meeting the 9% target are the cumulative annual energy savings achieved throughout the nine year application of the Directive, as measured in the ninth year of its application. Energy savings made in years prior to the entry in to force of the Directive may also be counted but not generally from years earlier than 1995. Furthermore, the 9% is measured as a percentage of the average annual final inland energy consumption of all energy users in the five years prior to the implementation of the Directive, i.e. April 2001 to March 2006.

The Energy Services Directive is targeted at implementation of energy efficiency rather than carbon reduction measures, which is the objective of the current EELP. As such measures that primarily involve switching from one fuel to another rather than an overall fuel saving, whilst contributing to EELP targets, will not contribute substantially towards the meeting of the Directive obligations.

A simple, initial analysis³³ suggests that the EELP will contribute: 107% of a 9% saving in total (i.e. domestic and non-domestic) electricity consumption; 65% of a 9% reduction in total residential energy (i.e. electricity, oil and gas) consumption; and 18% of a 9% reduction in the total energy consumption covered by the ESD.

5.11 Leveraging and Additionality

As has been described, the savings that have been part-funded by the DSD Warm Homes Plus scheme do not all count towards meeting suppliers' targets and thereby earning incentives. Likewise, changes to the Framework Document have been considered such that savings that have been part-funded under gas distribution price controls are similarly shared. More generally, scheme proposals should be required to describe the provenance of third party funding. As now with Warm Homes Plus

³³ See Appendix H.

and the gas distribution price controls, savings funded by *any* government-sponsored or regulatory arrangement should not count towards achieving targets and earning incentives.

Similarly, for additionality, the 20% minimum funding criterion may be only partially effective. And whilst it may be possible that the additionality or otherwise of certain measures can be reflected in the standard estimates assigned to those measures, more generally scheme proposals should be required to justify why the energy savings proposed would not have occurred without Levy funding. This is particularly so in the non-domestic sector, where it is less clear why businesses should not be behaving rationally of their own volition. Clearly only additional measures should count towards meeting targets and earning incentives.

5.12 Transparency

The Utility Regulator should seek views as to whether scheme sponsors should be required to explain to customers the origin of funds used to pay for measures or whether it might be appropriate to apply this requirement only to dominant suppliers.

6 Other Approaches

6.1 Licence Obligation on Electricity Suppliers

As an alternative to defining an available Levy fund together with incentives on suppliers to spend it, a licence obligation could be placed on suppliers to commission a certain level of energy savings, similar to the CERT arrangements in GB. Licensed suppliers in GB have had such obligations for several years and these are generally considered to have worked well. As in GB, no explicit Levy would be required and suppliers would have to fund energy savings measures and recover the costs through their supply tariffs.

In GB, a supplier's ability to meet its carbon emissions reduction target cost-effectively is another source of competitive advantage. With no price regulation, the price a supplier can charge will be determined by the prices charged by its competitors, which will include the cost to its competitors in meeting their respective carbon emissions reduction targets. In Northern Ireland, however, supply competition is not yet effective and price regulation of NIE Energy will be required for the foreseeable future. Consequently, at least for NIE Energy³⁴, an allowance would be needed in its price control to cover the additional costs of any energy savings obligation, just as allowance is made for all other aspects of its licensed activities. Essentially the current problem of determining the size of the Levy and suitable incentive targets would be transformed into a price control problem of determining obligations and the appropriate revenue allowance.

A disadvantage of relying solely on obligations on licensed suppliers would be that the access to funding for energy saving measures would be, as now, only through suppliers and the potential advantages of opening up the EELP arrangements directly to other organisations, as discussed in Section 5, would not be realised. Another approach would be thus to retain an explicit Levy, with funds available to non-suppliers, but place an obligation on NIE Energy, as the dominant incumbent, to participate. However, an obligation on NIE Energy to deliver a certain level of energy savings would, if the obligation were sufficiently onerous, drastically restrict the funds available for non-suppliers. Conversely, a lower obligation on NIE Energy would risk

³⁴ As other suppliers are not subject to price control, no price control allowances would be necessary.

fewer energy savings measures being taken in total in the event that other parties did not choose to participate.

Another option, thus, might be an obligation on NIE Energy to bid schemes to deliver a certain level of energy savings³⁵. Whether or not these schemes were selected would be dependent on how they compare with schemes submitted by other parties. However, the concern remains that, should the availability of suitable projects remain limited, even if only in the short-term, then partner organisations might have to decide whether to bid a scheme in directly or through NIE Energy.

In view of these problems, a Levy plus incentives, as described in Section 5, may be sufficient, without the need for any explicit licence obligation. Providing the incentive targets are achievable there is no reason to suppose why energy savings should not be delivered that are at least equal to those being delivered currently.

6.2 UK Wide Arrangements

An alternative means of promoting competition in delivering energy efficiency savings to opening the Levy fund up to non-suppliers may be to consider merging the existing scheme in Northern Ireland with the CERT scheme in GB. Under such an arrangement all UK suppliers would be set carbon emissions/energy efficiency targets which could be delivered through schemes anywhere in the United Kingdom. Such a scheme may have the additional benefit of increasing the awareness of retail competition in Northern Ireland among GB suppliers.

Whilst it would be interesting to solicit wider views on such a proposal, for a number of reasons the retention of a separate Northern Ireland scheme is favoured. These reasons include that the nature of the issues to be resolved in Northern Ireland are different from those in GB (e.g. the higher degree of fuel poverty in Northern Ireland and a much lower penetration of gas), and the danger that, in the short term at least, efforts of GB suppliers would continue to be focussed in GB rather than in Northern Ireland. Furthermore, the solution proposed in Section 5 would permit GB suppliers to bid in to receive NI Levy funding and hence has the potential to enable additional competition in delivery of schemes not just from GB suppliers but from non-suppliers as well.

³⁵ The obligation would have to require that the bids submitted were of a specified cost-effectiveness or better. Otherwise the obligation could be met by bidding schemes that were far inferior to those delivered by the current arrangements.

6.3 All-Island Approach

In November 2007, the Single Electricity Market (SEM) was introduced in Northern Ireland and Ireland, implementing a single set of wholesale trading arrangements set out in the Trading and Settlement Code (TSC) through which the vast majority of electricity on the island is now bought and sold. The introduction of the SEM also included new all-island arrangements relating to electricity transmission, e.g. all-island use of system charges, harmonised Grid Codes and obligations on transmission licence holders to undertake activities on an all-island basis. Cross-regional regulatory arrangements were also established in order to ensure inter-jurisdictional consistency with respect to regulatory decision-making in relation to SEM matters. For these purposes the SEM Committee was established in both jurisdictions.

Whilst all-island arrangements were introduced in relation to wholesale electricity, retail matters continue to be dealt with on a local jurisdictional basis and, except to the extent that such matters impinge on the wholesale SEM arrangements, they fall outside the aegis of the SEM Committee.

Whilst there may, in future, be merits in considering expanding the EELP to operate as part of a wider all-island scheme the principal objective and duties of the Department, Authority and SEM Committee³⁶ relates to consumers in both the Ireland and Northern Ireland only in relation to SEM matters. As this is the case, absent further legislative change, the introduction of an all-island scheme is likely to remain outside the scope of the Authority's duties and functions. Furthermore, any all-island arrangement would raise a substantial number of significant issues, for example: whether there is a significant difference in the scope for energy saving measures in the two jurisdictions; whether any levy would be likely to represent a cross-subsidy between one jurisdiction and another; how an all-island EELP would contribute to national obligations in relation to the Energy Services Directive, etc. Given scope and nature of these issues, it is unlikely that any all-island solution could be developed in the short-term. Furthermore³⁶, opening up the EELP arrangements to non-suppliers could allow Northern Ireland consumers to benefit from the energy efficiency expertise of companies outside Northern Ireland and it is not immediately clear what additional benefits an all-island scheme would bring over and above this.

³⁶ See Article 9 of The Electricity (Single Wholesale Market) (Northern Ireland) Order 2007.

Hence, at least for the time being, the EELP should continue to focus on addressing the issues associated with the current scheme in the context of Northern Ireland.

7 Specific Proposals

The EELP should continue past the current three year period approved by the Authority ending 2009/10 but should be subject to a number of reforms. Specific proposals are as follows.

- (1) Organisations other than licensed electricity suppliers should be permitted to compete for Levy funding.
- (2) The Utility Regulator should seek views as to whether measures providers should be allowed to bid for Levy funding directly and as to whether controls and monitoring could compensate for the loss of transparency and prevent the inflation of measures costs.
- (3) Other constraints should be placed on the identity of bidders. For example in order to avoid excessive administration costs both of handling a high number of bidders and of monitoring bidders that may be submitting schemes purely in their own interests, schemes should be of a minimum size, say, £10,000 of Levy funding. Bidders should be or use reputable contractors.
- (4) A number of constraints under the existing scheme should be retained and kept under review, depending upon the success of the more competitive arrangements, i.e.
 - incentive payments to encourage schemes to maximise the energy savings measures obtained for Levy funding;
 - the requirement to provide transparency of the costs of measures
 - controls on the level of management and administrative expenses.
- (5) The incentive rate should be reduced from the current £5120/GWh to £1000/GWh, whilst experience of the extent of competition for funds can be assessed;
- (6) More realistic targets should be set by ensuring that the assumptions regarding the mix of measures, the fuel mix and third party funding are more realistic of actual outturns. For the first year, the contribution to the incentive target for each scheme should be based on an average of the marginal cost-effectiveness of the group and the cost-effectiveness of the specific scheme.

To prevent any distortion to incentives, schemes with such outlying costs could be excluded from the group average calculation.

- (7) Additional clarity should be introduced into the Framework Document, specifically for situations where, thus far, rules have not been needed.
- (8) No specific arrangements for underperformance should be introduced, other than that funding will be pro-rated by the energy savings achieved. However, if underperformance becomes an issue, more onerous arrangements for under-performance should be introduced.
- (9) Pending analysis of the 2006 House Condition Survey, the Utility Regulator should seek views as to the scope for further energy savings measures. In the absence of views to the contrary, the size of the Levy should remain broadly at current levels for the first year (with appropriate indexation). Taking the reduction in incentive payments into account, the funding for measures costs should be increased by £1m which would, except in the event of a very large increase in energy savings, not result in any increase in the total Levy funding including incentives. The size of the Levy should be kept under review, based on the nature and number of schemes submitted. If there is a high demand for funding whilst scheme costs remain acceptably low, consideration should be given to increasing the size of the fund in later years;
- (10) The relative focus of the scheme on priority schemes - currently 80% - should be reviewed in light of: (i) the 2006 House Condition Survey; (ii) the Utility Regulator seeking views on the issue; (iii) further detail emerging of other initiatives to assist the fuel poor; and (iv) on an ongoing basis, depending upon the types of schemes that are submitted following changes to permit non-suppliers to bid for Levy funding.
- (11) The emphasis of whole house solutions should be lessened with a view to enabling measures to be spread over a larger number of homes within the priority group with a view to levelling up the worst cases of fuel poverty or maximising energy efficiency gains alleviating fuel poverty. Whole house solutions should be selected on the grounds of their cost-effectiveness.
- (12) Views should be sought as to whether schemes should be permitted to assist with the purchase cost of heating oil and, if so, how this assistance should be

prevented from going beyond that necessary to give effect to energy efficiency and becoming, instead, a pure subsidy of fuel purchase.

- (13) The Utility Regulator should seek views on ending the segregation of funds between non-priority domestic measures and non-priority commercial measures, in order to maximise energy efficiency gains.
- (14) The 20% additionality criterion should be augmented by a requirement for scheme proposals to justify why measures are additional.
- (15) The 5% cap on indirect costs should be replaced by a more sophisticated criterion. Views should be sought on the appropriate form and level of the cap to ensure that, whilst the allowance for indirect costs is realistic, the maximum funds are available to be spent on measures.
- (16) The raising of Levy funds should not be extended to gas unless it is also extended to oil.
- (17) The option of placing obligations on suppliers to submit a certain quantity of schemes should not be introduced initially but this should be kept under review in light of experience of operation of the scheme.
- (18) The Utility Regulator should seek views as to whether scheme sponsors should be required to explain to customers the origin of funds used to pay for measures or whether it might be appropriate to apply this requirement only to dominant suppliers.

Appendix A - Framework Document Criteria for Funding

Section 2.1, "Eligible Initiatives", of the Framework Document, March 2008, states:

"The original framework document for the Levy, developed by EST in 1998, set out a number of essential criteria that projects submitted for funding needed to satisfy. These criteria will continue to be applicable under this new phase of the Levy.

Projects submitted for funding must therefore meet all of the following essential criteria:

- *Funding must be targeted at activities that result in energy efficiency measures being adopted. Funding cannot be used for research, demonstration or purely educational projects.*
- *Projects aimed at priority group customers must be targeted in line with the guidance provided in Section 2.4 and of this document.*
- *Measures promoted should be in customers' financial interest. In other words, the present value of the lifetime customer benefits (energy bill savings and improved comfort) should exceed the cost of the measures;*
- *Measures should deliver overall economic benefits to Northern Ireland;*
- *Measures promoted should be proven technology which meet or exceed relevant standards (e.g. safety, quality, etc);*
- *Projects must be additional to any planned activity, regulatory obligation or government-funded initiatives. In order to ensure that Levy funding has effected the commencement of a project (i.e. the project would not have taken place without that funding) the supplier's contribution will normally need to be a minimum of 20%. This applies to all projects, but it is expected that this criteria would be applicable more to non-priority projects, as far higher levels of supplier funding are usually required for fuel poverty projects. Where it is proposed to fund less than 20%, clear evidence that the project would not otherwise proceed would need to be provided;*
- *Projects should be structured, where possible, to secure the maximum level of funding from customers and third parties, e.g. equipment manufacturers; housing providers; fuel suppliers*
- *Projects should be designed and managed cost effectively;*

- *Projects should be designed to minimise free riders, i.e. those who are likely to have adopted a measure without any support or encouragement;*

Section 2.2, "Eligible Costs", further states:

"In broad terms, any activity which satisfies the above criteria is eligible for funding. Individual projects may include some or all of the following costs:

- *Project development costs;*
- *Project management costs (see also section 3.8);*
- *Direct subsidies for measures;*
- *Loans to customers or third parties;*
- *Project-specific external costs including marketing;*
- *Monitoring costs;*
- *Evaluation costs;*
- *The Energy Saving Trust's costs associated in assessing, approving, evaluating and auditing projects on behalf of NIAUR."*

Appendix B - March 2006 Review

In March 1996, NIAUR undertook a review of the Northern Ireland Energy Efficiency Levy³⁷, raising a number of specific questions, as follows.

- (i) Is there a continuing justification for a levy on customers?
- (ii) Is there a case for a further annual increase in the levy to say, £10 per customer?
- (iii) Should there be an equivalent levy on natural gas customers?
- (iv) Are there alternative models for supporting energy efficiency and fuel poverty e.g. the GB EEC model?
- (v) Given that Government through the Department of Social Development has significantly upped its contribution to the eradication of fuel poverty in Northern Ireland (up from £3.4m in 2001/02 to £20.4m for 06/07 and £20.4m for 07/08), which was not the case when Ofreg committed levy money of £1.6m pa in 2001/02, should the emphasis of levy money not switch away from fuel poverty now and focus on energy efficiency and carbon savings?
- (vi) Is the administration of the levy carried out in a sufficiently transparent manner that suppliers/ project co-ordinators are comfortable with?
- (vii) Given that the levy is well established, successful and accepted in its current format, is any change required?

NIAUR received fifteen responses to the 2006 consultation. Whilst these responses were taken into account in setting subsequent schemes, they did not, at that time, inform a more fundamental restructuring of the EEL scheme. The principal issues raised in the responses to the 2006 consultation are set out below.

Whilst some respondents thought that there was a need for a fundamental review of EELP none proposed a cessation of the programme. There was a mixed view on what the size of the levy should be in future. Several respondents suggested that the (then) current levy of an average of £7 per customer was appropriate (principally, it was argued, because the levy was used to help alleviate fuel poverty) but that it would be inappropriate to increase the levy at a time when there were many other

³⁷ See: <http://ofreg.nics.gov.uk/27%20March%202006.htm>

pressures on household incomes. Respondents with these views typically also believed that the levy should continue to be focussed towards the fuel poor.

Other respondents believed that there was a case for increasing the levy. Reasons given for this included: that the current scheme was a success and there was a case for increasing the amount of work done under it; and that there was a need for equity with GB schemes in addressing CO2 emissions. One respondent believed that the levy should be funded from Government funds rather than through electricity prices.

Whilst a few respondents supported an extension of the levy to gas customers in principle, others were concerned about the impact that this would have on fuel poverty or on the developing gas market. In all instances, respondents on this issue did not believe that it would be appropriate to extend the levy to gas without also including oil.

There was a split in responses between those who believed that it was important to continue to focus the scheme on the alleviation of fuel poverty and others who were of the view that it should now switch to energy efficiency or a reduction in carbon emissions. Some respondents noted the substantial increase in DSD funding to help alleviate fuel poverty and suggested that it may be appropriate to re-focus the levy on energy efficiency in light of this. Others noted that energy efficiency issues were only one element of fuel poverty and that fuel poverty should probably now be addressed more from the perspective of fuel prices and household incomes. One respondent believed that the continuing focus of the levy on the fuel poor was inequitable and potentially a waste of resources if EEL funds were continually competing with other programmes to find a limited number of vulnerable customers.

A number of respondents commented on the issue of incentives. Views on this issue included that: the targets for incentives were too easy to achieve; the incentive payments simply constituted an additional financial burden on electricity consumers; they should be the subject of a more fundamental review; that current levels of incentive payment are unacceptably high and, conversely, that the current scheme with its incentive arrangement had led to substantial savings for NI consumers with a better value for money than equivalent schemes in GB.

In additions to calls for a fundamental review of the levy arrangements, several respondents believed that essentially the current scheme worked well. Some expressed concern over how the scheme was being marketed to consumers and called for greater transparency in the operation of the scheme, including in the decision making processes as well as in providing audited reports of the scheme's

operation. Others indicated that recent changes to improve transparency had been made and that the scheme was a very transparent and simple model with regular audit. Some suggested that there was a need to ensure that electricity consumers and community groups were better informed, perhaps by including the levy as a separate line item in bills and providing greater information to the general public and community and voluntary groups as to how the scheme operates.

Several respondents commented on the interaction between the EELP and the Warm Homes Plus scheme. A number were concerned to ensure that the levy was additional to funding from DSD and not a replacement for it. It was also suggested that the Warm Homes Plus scheme had come to rely on the levy, rather than the levy being viewed as complementary funding and that this was not appropriate.

A number of specific suggestions for improvement of the operation scheme were proposed. These included:

- There should be more flexibility in what the scheme can fund and how success is measured. Several specific proposals were received in this area (for example allowing greater funding of salary and other overhead costs, the repair of broken down gas or oil systems, provision of heating control packs, support for the use of new technologies on hard to treat homes, upgrade of old heating systems and to provide renewable/alternative technology).
- There should be further incentivisation for a whole house approach – i.e. additional loft insulation should be considered at the same time as cavity wall insulation.
- It should be open to all energy providers, or other organisations to bid for levy funding.
- Schemes should be permitted to run for more than one year to avoid stop-start schemes and to provide more incentives for longer term investments by suppliers.
- There should be a redefinition of priority customers.
- Some supported considering an Energy Efficiency Commitment (EEC) approach to introducing supplier obligations, although others suggested that this would not be appropriate in NI.
- A separate levy on business customers should be considered.
- It may be better value for money if there were a smaller number of schemes.

- Additional incentives to support innovation should be considered (e.g. in the development of super energy efficient appliances etc.).
- EST payments should be taken centrally, not on a scheme by scheme basis.
- EST should confirm earlier what schemes are successful.
- There was specific support for the cash-back scheme as being particularly successful.

Other comments included: that use of the term “fuel poverty proof” in the Framework Document should be discontinued as energy efficiency measures cannot protect householders from escalating fuel prices or decreases in income and that the legal basis for the EELP in NI should be established in line with that in England, Scotland and Wales.

Appendix C - NIE Energy and NIE Licence Conditions

(a) NIE Energy Supply Licence:

Condition 55: Supply Charges Restriction

1. The Licensee shall comply with the condition set out in Annex 2.

Annex 2 – Supply Charge Restriction Conditions

1. Definitions

- 1.1 In this Annex:

.....

.....

“**Energy Saving Trust**”

means the trust of that name appointed by Government whose work includes approving and overseeing energy efficiency schemes on behalf of the Authority;

.....

.....

2. Restriction of supply charges: basic formula

The Licensee shall in setting its supply charges use its best endeavours to ensure that in any relevant year the average charge per unit supplied shall not exceed the maximum average charge per unit supplied. The maximum average charge per unit supplied shall be calculated in accordance with the following formula:

$$M_{St} = G_t + U_t + S_t + K_{St} + J_t + E_t - D_t$$

where:

M_{St} means the maximum average charge per unit supplied in respect of relevant year t.

.....

S_t means the allowed charge in pence per unit supplied to supply customers at 1 MW premises in relevant year t, which is derived from the following formula:

$$S_t = ((P_f + P_c * C_t) * P_{lt} + (V_t + W_t) * P_{RP_{lt}} + PP_t) / Q_{st}$$

where:

.....

Q_{st} means the quantity supplied in relevant year t;

.....

$V_t = N_{Vt} \times £480$

N_{Vt} means, in relevant year t, the number of new electrically powered vehicles sold in Northern Ireland and which have been certified, in a way approved by the Energy Saving Trust, to have been purchased during relevant year t-1.

$W_t = £100 \times N_{E7t}$

N_{E7t} means the number, agreed with the Energy Saving Trust, of premises within the authorised supply area that are both (i) supplied under a domestic Economy 7 supply contract (“**Home Energy Heating**”), and (ii) have had cavity wall insulation installed during relevant year t-1;

.....

5. Energy Efficiency Investments

5.1 The Licensee shall implement, during the relevant period, such energy efficiency schemes as are necessary to achieve present value lifetime energy savings of £16 million for its customers.

5.2 In the event that the Energy Saving Trust notifies the Authority that the energy efficiency schemes implemented during the relevant period do not achieve present value lifetime energy savings of £16 million for the Licensee’s customers, the Authority may, taking into account

any representations by the Licensee including on the level of present value lifetime energy savings achieved and/or the cause of any expected savings not achieved, by notice direct that the Licensee's allowed revenue (as determined by the Authority) for the period commencing 1 April 2007 be reduced by an amount up to a maximum of the difference between £16 million and the present value lifetime energy savings achieved by the Licensee's energy efficiency schemes, as determined by the Energy Saving Trust and approved by the Authority.

5.3The Licensee shall submit to the Energy Saving Trust a written proposal for each scheme to be implemented under the provisions of this Paragraph 5 in a form approved by the Energy Saving Trust.

5.4For each scheme approved by the Energy Saving Trust under subparagraph 5.1, the Licensee shall report to the Energy Saving Trust, on the period up to and including 31 March 2003 (and, thereafter, for the period up to 31 March of each subsequent year during the relevant period), in a form approved by and at such time as may be required by the Energy Saving Trust, on the energy savings provided by the measures installed during the relevant period under that energy efficiency scheme. The report shall cover a minimum of 5% of homes in which measures implemented under the relevant scheme have been installed, provided that in the case of energy efficiency schemes offering compact fluorescent lamps, the Licensee will report to the Energy Saving Trust on a 1% sample of homes in which the measures have been installed.

5.5On completion of each energy efficiency scheme, the Licensee shall submit to the Energy Saving Trust a completion spreadsheet and post-implementation report in a form approved by the Energy Saving Trust.

5.6The Licensee shall fund research at a cost of £150,000 on the targeting and implementation of energy efficiency schemes in Northern Ireland.

5.7The Licensee shall prepare and submit a procedure to the Authority on provision of reasonable assistance by the Licensee to proposed local community supply schemes.

5.8In this paragraph:

“energy efficiency schemes” means any scheme approved as such by the Energy Saving Trust.

“present value lifetime energy means, in respect of each energy efficiency

savings”

scheme, such savings as may be determined by the Energy Saving Trust in accordance with the Energy Efficiency Framework Document as updated March 2005 and as further updated from time to time, exclusive of customer contribution, as being a lifetime saving attributable to that scheme, expressed in present value terms at the time that scheme is implemented.

(b) NIE Licence to Participate in Transmission

Annex 2 – Transmission and Distribution Charge Restriction Condition

....

9. Vulnerable customer programme

Over the period comprising the four relevant years 2007, 2008, 2009 and 2010 the Licensee shall make available funding of no less than £1 million in total to cover the costs of establishing, implementing and running the Vulnerable Customer Programme in those years. By 31 December 2006 the Licensee shall develop and submit to the Authority for its approval, a proposal for the implementation and subsequent evaluation of a number of pilot schemes with the aim of identifying a more comprehensive programme that will make effective use of the available funding. Not less than 3 months after the end of each of the four relevant years the Licensee shall submit to the Authority an annual report in a form to be approved by the Authority on the performance of the programme during the relevant year under report and its proposals for the remainder of the programme.

“Vulnerable Customer Programme”

means the programme of that name to be established by the Licensee comprising projects specifically targeted at combating fuel poverty by assisting low income households to identify unclaimed social security benefits and facilitate the making of relevant claims to the Social Security Agency

Appendix D - DSD Partnership Funding 06/07

Fuel Poverty Scheme	Number of Homes Assisted	DSD Funding	Other Funders
Phoenix Family Heating	300	£ 52,800	NIE, Phoenix Natural Gas
Private Landlord	64	£ 31,180	NIE
Help the Aged	68	£ 51,236	NIE, EST
Age Concern	20	£ 19,820	NIE
Northern Investing for Health	50	£ 39,754	NIE, EST, Northern Investing for Health Partnership
Armagh and Dungannon Health Action Zone	60	£ 46,530	NIE
Lurgan	80	£ 45,458	NIE
Cosy Homes	360	£ 112,601	NIE, Phoenix Natural Gas
Critical Care	20	£ 19,170	NIE
Northern Exposure	40	£ 23,689	NIE, Phoenix Natural Gas, Belfast City Council, EST, N & W Belfast Investing for Health
Warmstart Insulation	50	£ 9,354	NIE

*Source: "Tackling Fuel Poverty: The Inter-Departmental Group Report",
Department of Social Development, 2007*

Appendix E - Energy Services Directive

Article 6 of Directive 2006/32/EC of the European Parliament and the Council on energy end-use and energy services (the “Energy Services Directive”) states:

- “1. *Member States shall ensure that energy distributors, distribution system operators and/or retail energy sales companies:*
 - (a) *provide on request, but not more than once a year, aggregated statistical information on their final customers to the authorities or agencies referred to in Article 4(4) or to another designated body, provided that the latter in turn transmits to the former the information received. This information must be sufficient to properly design and implement energy efficiency improvement programmes, and to promote and monitor energy services and other energy efficiency improvement measures. It may include historical information and must include current information on end-user consumption, including, where applicable, load profiles, customer segmentation and geographical location of customers, while preserving the integrity and confidentiality of information that is either of private character or commercially sensitive, in compliance with applicable Community legislation;*
 - (b) *refrain from any activities that might impede the demand for and delivery of energy services and other energy efficiency improvement measures, or hinder the development of markets for energy services and other energy efficiency improvement measures. The Member State concerned shall take the necessary measures to bring such activities to an end where they occur.*
2. *Member States shall:*
 - (a) *choose one or more of the following requirements to be complied with by energy distributors, distribution system operators and/or retail energy sales companies, directly and/or indirectly through other providers of energy services or energy efficiency improvement measures:*
 - (i) *ensure the offer to their final customers, and the promotion, of competitively priced energy services; or*
 - (ii) *ensure the availability to their final customers, and the promotion, of competitively-priced energy audits conducted in*

an independent manner and/ or energy efficiency improvement measures, in accordance with Article 9(2) and Article 12; or

(iii) contribute to the funds and funding mechanisms referred to in Article 11. The level of such contributions shall as a minimum correspond to the estimated costs of offering any of the activities referred to in this paragraph and shall be agreed with the authorities or agencies referred to in Article 4(4); and/or

(b) ensure that voluntary agreements and/or other market-oriented schemes, such as white certificates, with an effect equivalent to one or more of the requirements referred to in point (a) exist or are set up. Voluntary agreements shall be assessed, supervised and followed up by the Member State in order to ensure that they have in practice an effect equivalent to one or more of the requirements referred to in point (a). To that end, the voluntary agreements shall have clear and unambiguous objectives, and monitoring and reporting requirements linked to procedures that can lead to revised and/or additional measures when the objectives are not achieved or are not likely to be achieved. With a view to ensuring transparency, the voluntary agreements shall be made available to the public and published prior to application to the extent that applicable confidentiality provisions allow, and contain an invitation for stakeholders to comment.

- 3. Member States shall ensure that there are sufficient incentives, equal competition and level playing fields for market actors other than energy distributors, distribution system operators and retail energy sales companies, such as ESCOs, installers, energy advisors and energy consultants, to independently offer and implement the energy services, energy audits and energy efficiency improvement measures described in paragraph 2(a)(i) and (ii).*
- 4. Under paragraphs 2 and 3, Member States may place responsibilities on distribution system operators only if this is consistent with the requirements relating to the unbundling of accounts laid down in Article 19(3) of Directive 2003/54/EC and in Article 17(3) of Directive 2003/55/EC.*
- 5. The implementation of this Article shall be without prejudice to derogations or exemptions granted under Directives 2003/54/EC and 2003/55/EC."*

Article 1 states

“For the purposes of this Directive, the following definitions shall apply:

...

- (e) *‘energy service’: the physical benefit, utility or good derived from a combination of energy with energy efficient technology and/or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to lead to verifiable and measurable or estimable energy efficiency improvement and/or primary energy savings;*

...”

Appendix F - EELP Summary Statistics

Table 1: Summary Statistics

Year	Customer Numbers	Levy		Target Saving GWh	Actual Saving GWh	Tot. Project Cost £m	Incentive Payments		Carbon Saving tonne C	Customer Savings £m	Cost-Effectiveness	
		£/Cust.	£m				£/GWh	£m			Levy p/kWh	Total p/kWh
1997/98	665000	£1.00	0.665	55.0	54.0		4000	0.000	13,415	4.8	1.23	
1998/99	675340	£1.00	0.675	55.0	78.0		4000	0.092	20,593	6.6	0.87	
1999/00	685680	£1.50	1.029	80.0	123.0		4000	0.172	33,960	10.4	0.84	
2000/01	696020	£2.00	1.392	110.0	187.0		4000	0.308	57,138	15.0	0.74	
2001/02	706360	£2.05	1.448	122.0	189.0		4000	0.268	52,409	11.4	0.77	
2002/03	716700	£5.00	3.584	332.0	451.0		4415	0.525	92,228	25.4	0.79	
2003/04	726750	£5.13	3.728	343.0	449.0		4415	0.468	84,614	17.2	0.83	
2004/05	736900	£5.30	3.906	230.4	380.3	7.115	4415	0.662	100,332	21.0	1.03	1.87
2005/06	747200	£6.00	4.883	292.4	481.0	9.284	4415	0.833	132,010	30.1	1.02	1.93
2006/07	757650	£6.00	4.946	272.8	615.4	11.173	4415	1.513	132,087	38.8	0.80	1.82
2007/08	806550	£7.00	5.646	374.3	655.6	9.919	4995	1.405	137,891	42.6	0.86	1.51
2008/09	823500	£7.18	5.909	431.8	652.5	10.780	5120	1.130	136,949	42.4	0.91	1.65
2009/10	840800	£7.35	6.184	429.5			5248					
Total to 2008/09			37.810	2,699	4,316			7.376	993,626	265.7	0.88	

Source: Energy Saving Trust and NIAUR

Note 1: Levy amounts are the Levy funding available, and will not correspond exactly with Levy funds actually spent, as shown in Table 2.

Note 2: 2008/9 figures are projections on the basis of scheme proposals, not outturns as previous years. For 2009/10, scheme proposals have not yet been submitted.

Table 2: Breakdown by Customer Group

	Year	2004/5	2005/6	2006/7	2007/8	2008/9
Priority Domestic						
Accredited Savings	GWh	259.5	237.7	304.4	323.7	272.2
Levy Cost	£	3,213,696	3,631,114	3,902,809	4,514,318	4,657,611
Total Project Cost	£	5,921,329	6,662,835	8,202,090	6,247,808	7,031,042
Levy Cost-Effectiveness	p/kWh	1.238	1.528	1.282	1.394	1.711
Project Cost-Effectiveness	p/kWh	2.282	2.803	2.695	1.930	2.583
Non-Priority Domestic						
Accredited Savings	GWh	73.3	145.7	178.717	134.1	135.4
Levy Cost	£	366,580	795,741	759,764	588,906	546,682
Total Project Cost	£	682,335	1,710,288	1,509,598	1,797,294	1,661,591
Levy Cost-Effectiveness	p/kWh	0.500	0.546	0.425	0.439	0.404
Project Cost-Effectiveness	p/kWh	0.931	1.174	0.845	1.340	1.227
Non-Priority Commercial						
Accredited Savings	GWh	47.4	97.6	132.271	197.7	244.9
Levy Cost	£	242,989	375,998	344,183	561,309	582,539
Total Project Cost	£	511,422	911,307	1,461,403	1,874,194	2,087,457
Levy Cost-Effectiveness	p/kWh	0.512	0.385	0.260	0.284	0.238
Project Cost-Effectiveness	p/kWh	1.078	0.933	1.105	0.948	0.852
Total						
Accredited Savings	GWh	380.3	481.0	615.4	655.6	652.5
Levy Cost	£	3,823,265	4,802,853	5,006,756	5,664,533	5,786,832
Total Project Cost	£	7,115,085	9,284,430	11,173,091	9,919,296	10,780,090
Levy Cost-Effectiveness	p/kWh	1.005	0.998	0.814	0.864	0.887
Project Cost-Effectiveness	p/kWh	1.871	1.930	1.816	1.513	1.652

Source: Energy Saving Trust

Appendix G - Summary of Energy Efficiency Levy Schemes for 2006/7

Scheme Reference	Scheme Title	Category	Levy Cost £	Lifetime Savings			Cost Effectiveness p/kWh
				Energy GWh	Carbon tonne	Customer £	
ENA0602L	ENA Lighting Scheme 2	NPC	104,046	35.69	8,699	3,472,211	0.29
ENA0603O	ENA VSD Scheme	NPC	77,740	48.23	11,757	4,692,692	0.16
ENA0604O	ENA Refrigeration Scheme	NPC	63,537	15.86	1,924	730,146	0.40
NIE0607O	Fuelstretcher Schools	NPC	60,852	20.38	4,475	1,057,144	0.30
NIE0625M	Small Business Energy Efficiency	NPC	38,008	12.11	2,300	1,211,406	0.31
	<i>Sub-total</i>	<i>NPC</i>	<i>344,183</i>	<i>132.27</i>	<i>29,155</i>	<i>11,163,599</i>	<i>0.26</i>
NIE0604I	B&Q Loft Insulation	NPD	50,710	6.22	1,945	390,102	0.82
NIE0605I	Cavity/Loft Insulation Cashback	NPD	268,525	81.37	17,535	7,021,902	0.33
NIE0609A	Appliance Trade-in Scheme	NPD	36,514	4.77	1,070	429,545	0.77
NIE0616I	ADHAZ Insulation	NPD	12,777	1.61	321	132,199	0.79
NIE0617I	Lurgan Insulation	NPD	48,517	6.38	1,261	517,338	0.76
NIE0618I	Warm Start Insulation	NPD	7,037	1.11	227	110,759	0.64
NIE0619La	Bulb Suppliers	NPD	40,091	11.53	2,996	1,126,795	0.35
NIE0619Lb	HA & Fulfilment	NPD	19,320	3.53	814	343,081	0.55
NIE0619Lc	Giveaway	NPD	150,680	39.24	10,968	3,823,117	0.38
NIE0622I	Commercial Rural Homes	NPD	119,994	22.07	4,561	1,824,570	0.54
NIE0623I	North Belfast Exposure Insulation	NPD	5,599	0.89	167	74,962	0.63
	<i>Sub-total</i>	<i>NPD</i>	<i>759,764</i>	<i>178.72</i>	<i>41,865</i>	<i>15,794,370</i>	<i>0.43</i>
NIE0601O	Free Oil Boiler a Insulation	PD	91,189	8.14	2,024	331,084	1.12
NIE0602O	Phoenix Snug Plus (Family Heating)	PD	278,449	29.98	6,438	1,073,378	0.93
NIE0603O	Phoenix Free Boiler & Insulation	PD	434,847	53.31	11,937	2,048,834	0.82
NIE0606O	Private Lalord Scheme	PD	46,381	3.81	781	196,339	1.22
NIE0608O	Help the Aged	PD	149,866	5.44	1,146	241,723	2.76
NIE0610O	Age Concern	PD	77,354	2.44	511	126,131	3.17
NIE0611O	Northern Investing for Health Year 2	PD	125,206	7.17	1,521	311,690	1.75
NIE0612O	Armagh & Dundannon Health Action Zone	PD	100,110	3.19	662	160,638	3.14
NIE0613O	Lurgan Fuel Poverty	PD	163,042	3.23	693	130,328	5.05
NIE0614O	Cosy Homes	PD	379,919	36.75	7,629	2,094,338	1.03
NIE0615O	Critical Care	PD	62,925	2.19	539	96,306	2.87
NIE0624O	North Belfast Exposure Priority	PD	85,211	2.90	615	130,284	2.94
NIE0626O	Warm Homes Plus	PD	1,907,316	145.40	26,465	4,890,253	1.31
NIE0629O	Firmus Free Boiler & Insulation	PD	994	0.43	106	22,607	0.23
	<i>Sub-total</i>	<i>PD</i>	<i>3,902,809</i>	<i>304.37</i>	<i>61,067</i>	<i>11,853,933</i>	<i>1.28</i>
	TOTAL		5,006,756	615.36	132,087	38,811,902	0.81

Source: Energy Savng Trust

Appendix H - Compliance with ESD Target

The analysis below presents a rough estimate of the contribution of the EELP to meeting the targets in the Energy Services Directive. It is reliant upon a number of assumptions, and a more rigorous analysis should be undertaken at the appropriate juncture. Principal sources of uncertainty in the analysis arise from the following:

- The data used in the analysis is based on the GWh lifetime savings quoted for the EELP schemes. For ESD purposes, these need to be converted from *lifetime* savings to *annual* savings in 2014/15. In making this conversion, an average lifetime for measures of 20 year is assumed.
- Estimates of total (i.e. all energy sources) NI residential demand and total NI final consumption are derived by multiplying by one third the equivalent figures for ROI as stated in the Energy Ireland Yearbook 2008.
- GWh energy savings, as quoted in EELP scheme proposals, are in fact a statement of the carbon savings of the measures expressed in GWh of electricity equivalent. This means, for example, that:
 - o a conversion from electric to gas heating would contribute to the GWh savings identified under the EELP, primarily due to the lower carbon content of gas compared to electricity. However it would appear that ESD targets are expressed in terms only of the energy (rather than carbon) savings. Hence the contribution of fuel switching measures to meeting ESD targets is very much less than the contribution to EELP targets; and
 - o for measures such as the installation of insulation in oil heated homes, the quoted savings for EELP purposes are only 0.41kWh for each 1 kWh of oil. Hence, in such cases, the contribution towards EELP targets substantially understates the contribution towards the ESD target.

On a broad assumption that 40% of schemes are associated with fuel switching and therefore make no contribution to the ESD, whilst 60% are energy savings measures in oil-heated homes such that the EELP saving should be divided by 0.41 to derive the contribution to meeting the ESD target, the EELP will contribute: 107% of a 9% saving in total - domestic and non-domestic - electricity consumption; 65% of a 9% reduction in all residential energy consumption; and 18% of a 9% reduction in the total energy consumption covered by the ESD.

Estimate of effectiveness of EELP in meeting Energy Services Directive Targets

Year	Lifetime Savings GWh Actual	Energy Saving in 2014/15*	NI Electricity Demand (GWh)		
97/98	54	2.7		Average Demand in Five Years prior to introduction of ESD (GWh)	6394
98/99	78	3.9		ESD Target Saving (9%) (GWh)	575
99/00	123	6.2		Contribution of EELP to meeting ESD Target (electricity only)	71%
00/01	187	9.4			
01/02	189	9.5	6092	Estimate of NI residential Final Energy Consumption (01/02-05/06) (GWh)	10465
02/03	451	22.6	6214	ESD Target Saving (9%) (GWh)	942
03/04	449	22.5	6412	Contribution of EELP to meeting ESD Target	43%
04/05	340	17.0	6529		
05/06	481	24.1	6723	Estimate of NI TOTAL Final Energy Consumption (01/02-05/06) (GWh)	38372
06/07	615.4	30.8		ESD Target Saving (9%) (GWh)	3453
07/08	655.6	32.8		Contribution of EELP to meeting ESD Target	12%
08/09	652.5	32.6			
09/10	652.5	32.6			
10/11	652.5	32.6			
11/12	652.5	32.6			
12/13	652.5	32.6		After Adjustment for Fuel Standardisation Factor and Fuel Switching	
13/14	652.5	32.6		Electricity only	107%
14/15	652.5	32.6		Residential total	65%
Total		409.5		Total Energy Consumption	18%

Forecast Assuming Levy Remains at current rate

* Assumes 20 year average lifetime

Appendix I - NI Audit Office Warm Homes Report

On 23 June 2008 the Northern Ireland Audit Office (NIAO) published a report by the Comptroller and Auditor General entitled “Warm Homes: Tackling Fuel Poverty” into the Department of Social Development’s Warm Homes Scheme. The report was prepared under Article 8 of the Audit (Northern Ireland) Order 1987 for presentation to the Northern Ireland Assembly in accordance with Article 11 of that Order.

The principal conclusions of the report were:

- Warm Homes has helped to improve the lives of many. The Scheme has provided energy efficiency measures to some 60,000 homes since 2001: in 2007-08 it gave grants averaging £1,835 to almost 11,300 households. It has contributed to a range of government priorities beyond addressing fuel poverty, such as better health and fewer winter deaths, improved air quality and reduced carbon dioxide emissions;
- there are a number of ways in which Warm Homes could be improved to meet the challenge of eradicating fuel poverty;
- performance monitoring is simplistic and does not provide robust information with which to measure progress;
- the current eligibility criteria exclude significant numbers of the fuel poor, while providing assistance to many households which are not in fuel poverty;
- the energy efficiency measures available are not sufficient to lift some households out of fuel poverty and their impact in some households is negligible;
- the costs of scheme measures have increased considerably since 2001, in excess of inflation; and
- independent quality assurance has raised significant concerns about the quality and timeliness of the works completed over a number of years.

A number of specific proposals were also made:

- (1) *Performance management:* The Department should establish performance monitoring with related targets that can measure directly Warm Homes' contribution to eradicating fuel poverty. Ideally, these would measure the impact on household fuel poverty of Warm Homes' intervention, although a measure of the impact on household energy efficiency could be a useful

proxy. This may require a fuel poverty indicator tool for Northern Ireland, similar to that developed by the Centre for Sustainable Energy and the University of Bristol in England. Continuous monitoring, with timely action to address any emerging risks or shortfalls in performance will be necessary.

- (2) *Eligibility:* The Department should focus assistance on those in fuel poverty who need help the most. A review of the eligibility criteria should consider how the non-vulnerable fuel poor - those in low paid work, near benefit pensioners and others - can be supported; while excluding those who are eligible under the current criteria but are not fuel poor. The extension of the benefits health check to include all applicants would be a useful first step. It may also be necessary to introduce specific targets for assisting the rural fuel poor and those in extreme fuel poverty. Restricting eligibility to those on low incomes, as evidenced by receipt of means tested benefits, would concentrate help on those in need;
- (3) *Energy efficiency:* Warm Homes should provide the most effective measures to lift households out of fuel poverty. This should include making central heating available to all those who qualify for grants. Established solutions for 'hard to treat' homes, while comparatively expensive, should be made available within the Scheme on an exceptional basis. These may include renewable technologies such as solar water heating. Directing support towards the most energy inefficient homes, perhaps by establishing a target household energy efficiency rating for all homes treated, would make the most effective use of the Department's resources. This could require limiting any spending on energy efficient homes and on some measures which have little impact on fuel costs; and
- (4) *Contract management:* The Department should consider whether the substantial increase in the cost of measures is justified and whether a different specification or approach to subcontracting could potentially reduce costs. There is a need to ensure that timeliness and quality standards are delivered consistently and that where there are ambiguities in the technical specification, that these are resolved and the targets revised accordingly. The Department should also monitor Eaga's financial performance and ensure that it enforces the profit sharing clause in the Contract.

Skyplex is not aware that there are the same performance management issues with EELP. However, in light of the report by the Comptroller and Auditory General, it

may be appropriate for the Utility Regulator to review the EELP performance management arrangements associated in order to confirm that similar performance management issues do not arise. Skyplex has also proposed changes to the EELP to introduce limited penalties for under-performance and suggested that these are kept under review in the light of experience.

In general, the incentive arrangements under EELP should continue to encourage suppliers to identify the most effective schemes in terms of energy savings, taking into account administrative costs. A number of recommendations have been made to change the EELP arrangements in this area. These include for example steps to promote competition in bidding for EELP funding and specific measures aimed at improving the incentive regime of EELP. Whilst it is not proposed that EELP should necessarily focus on specific fuel poor groups, where there are groups, such as the rural fuel poor, for whom energy efficiencies are likely to be more effective at alleviating fuel poverty, the EELP arrangements should help to ensure that such customers are targeted. Whilst the indirect costs of targeting urban fuel poor may be less than for the rural fuel poor, to the extent that greater efficiency savings can be made in the homes of the latter, an appropriate balance between assisting the two groups should be struck. In this context, as is explained in Section 3.1.1, under the charge restriction conditions in its licence to participate in transmission, NIE's transmission and distribution business is also required to establish a programme comprising projects specifically targeted at combating fuel poverty by assisting low income households to identify unclaimed social security benefits and facilitate the making of relevant claims to the Social Security Agency.

With regard to the costs of measures, Skyplex's initial view is that measures providers should not be permitted to bid for scheme funding, such that transparency of costs may be maintained. Whilst this does not in itself necessarily ensure that costs are minimised, it should help to identify whether similar issues of cost escalation are an issue for EELP. It is also hoped that the introduction of competition for EELP funding will bring additional pressures on cost-management to bear. Again, this is an area in which it is recommended that the EELP is kept under review and further changes may be necessary in future if it does appear that either measures costs or administrative costs are increasing without being genuinely reflective of the efficient costs associated with the measures being taken.