Northern Ireland Sustainable Energy Programme
Annual Report 2011-12

Prepared by the Energy Saving Trust

1. Executive Summary

This annual report reviews the performance of Northern Ireland Sustainable Energy Programme (NISEP) schemes running during 2011-12, outlining the measures installed, financial benefits to beneficiaries and the energy (GWh) and carbon savings associated.

For 2011-12 the initial NISEP fund was £7,479,775 giving an average NISEP customer contribution of £9.07 per electricity customer across approximately 824,711 domestic and business customers. Some additional funding was made available due to underspend brought forward from previous years and in the course of 2011-12 a total of £7,882,252 was spent.

In total, 31 schemes were approved with two schemes closing mid-year due to lack of take up. The funds allocated to these were redistributed to other more successful schemes. Again there was some significant underspend on a number of commercial schemes and one significant domestic scheme. Table 1 below provides a summary of key achievements.

Table 1 - Summary Outturn Savings

Total lifetime energy savings (GWh)	707.404
Total lifetime carbon saved (tC)	135,819
Gross customer benefits (£)	72,410,175
Total incentives earned (£)	£245,518

2. NISEP background

NISEP is funded from a sum of money collected from all electricity customers through a Public Service Obligation (PSO), and it is used to provide funding for energy efficiency and renewable energy schemes. Previously known as the Energy Efficiency Levy (EEL), it is now known as the Northern Ireland Sustainable Energy Programme (NISEP).

The strategic objectives of the NISEP are to contribute to the achievement of:

- Efficiency in the use of energy;
- Socially and environmentally sustainable long-term energy supplies; and
- The above at best value to customers whilst also having due regard to vulnerable customers.

Since 2002, as a result of a consultative process, the majority of the funding (80%) has been targeted at vulnerable customers in Northern Ireland. Subsequent consultations have substantiated the view that this level of funding for vulnerable customers should remain given that fuel poverty levels in Northern Ireland remain high.

In 2011-12 the NISEP continued to focus on vulnerable customers (known internally as the Priority Sector) who are domestic customers on lower incomes and in, or at risk of, fuel poverty, with 80% of the total funding ring fenced for this sector. The remaining 20% was available for non-priority domestic and also commercial schemes.

NISEP funding for schemes aimed at Priority Sector customers typically provided a package of measures that included;

- Fabric (cavity wall or loft) insulation
- Heating system replacement including fuel switching and heating controls
- Low energy lighting
- Hot water cylinder jackets

The explicit aim of NISEP funding in the Priority Sector is to reduce energy consumption in the least energy efficient housing stock.

In the non-priority domestic and commercial sector measures included;

- insulation 'cash-back' offers for cavity wall, solid wall and loft insulation in the domestic sector
- variable speed drives and variable speed compressors
- LED lighting systems

3. Types of schemes in 2011-12

In 2011-12, 29 schemes ran and were subsequently completed during the year. This year saw some new Primary Bidders enter NISEP as the NISEP was opened up to organisations other then licensed energy companies, including Bryson Charitable Group, H&A Mechanical Services and the NI Housing Executive. The tables below summarise the number of schemes undertaken per Primary Bidder and schemes per category

Table 3.1 - Summary of schemes by Primary Bidder

Airtricity	3
Bryson Charitable Group	1
Energia	5
firmus energy	4
H&A Mechanical Services	1
NI Housing Executive	1
NIE Energy (now Power NI)	14

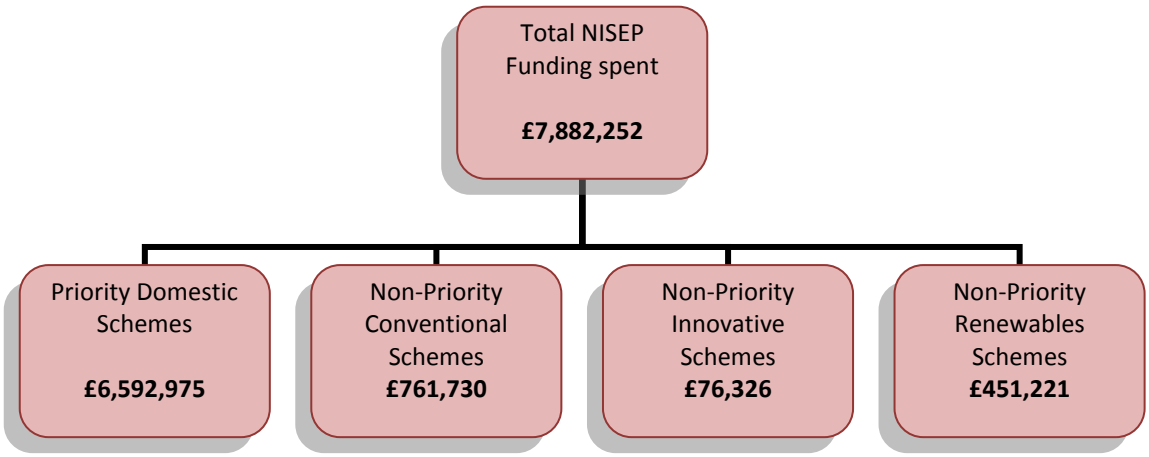
Table 3.2 – Breakdown of schemes by category

Priority Schemes	12
Non-priority domestic	2
Non-priority commercial	9
Non-priority innovative	2
Non-priority renewables	4

The 'Non-priority Innovative' category, introduced in 2010-11 continued, allowing schemes which address hard-to-heat homes, schemes which help to bring forward new but proven domestic or commercial technologies and schemes which provide renewable technologies but which may, due to the equipment involved, not be as cost-effective as other products but nonetheless are well suited and in the long-term may be mainstreamed in the portfolio of energy saving products. There was also the inclusion of a separate category for small scale renewables introduced this year which saw four schemes being delivered. The split of funds between Innovative and Renewables was 5% each.

Table 3.3 below shows how the NISEP funds spent were split between each funding category in 2011-12.

Table 3.3 - NISEP Breakdown of Funding Spent



4. Priority Domestic Schemes

Of the £7,882,252 spent overall, £6,592,975 was utilised on Priority Sector schemes (those targeted at households most at risk of fuel poverty), representing 84% of the total funding spent. This figure exceeds the 80% ring fenced for priority schemes and is due to the proportion of underspend being greater in the non-priority sector. Energy savings of 350 GWh in the priority sector represents about fifty per cent of the overall energy savings. This equates to a lifetime customer benefit of £31,635,597 for the most vulnerable households in Northern Ireland. In recent years both the House Condition Survey and the Fuel Poverty Advisory Group had identified the need for a scheme to support those who fall outside the Warm Homes criteria, including the working fuel poor and often, priority domestic schemes were designed to do this as these households were not eligible for Warm Homes.

In total, priority funding contributed to 35,029 energy efficiency interventions ranging from low energy light bulbs to new high-efficiency gas condensing boilers. Some schemes, such as Energy Saver Homes, provided fully funded measures whilst others provided a substantial grant towards the measures. Table 4.1 shows a breakdown of priority measures and Table 4.2 shows the breakdown of heating system installations.

Table 4.1 – Summary of Priority Measures Installed

Loft insulation	5,731
Cavity wall insulation	1,534
Sold wall insulation	60

Low energy lighting	23,643
Hot water cylinder jackets	1,625
Standby controls	67
Energy Monitors	665
Heating Replacements	1,704
TOTAL	**35,029**

Table 4.2 – Summary of Heating Replacements

Economy 7 to gas	415
Economy 7 to oil	9
Solid fuel to gas	133
Solid fuel to oil	21
LPG to gas	18
Oil to gas	679
Oil to oil	21
No heating to gas	135
No heating to oil	250
Oil to Biomass	23
TOTAL	**1,704**

5. Non priority schemes

Non-priority schemes provide part-funding, usually in the region of 20%, towards the cost of the energy efficiency measures. In the non-priority sector some of the commercial schemes were less successful in terms of spend than had been predicted in the scheme submissions. This mirrored the situation last year where capital spend in the business sector was tighter than in the past. However despite this, the out turn figures indicated that some schemes were very cost effective e.g. the cost effectiveness target for non-priority commercial established technology was 0.25p/kwh but some of these schemes achieved a cost effectiveness as high as 0.13p/kwh.

6. Utilisation of NISEP Funding 2011-12

Table 6.1 below shows a summary of the approved schemes this year along with NISEP contribution spent, GWh lifetime energy savings, lifetime carbon tonnes and the gross customer financial benefit of each scheme. The graphs show as a breakdown of GWh savings by category and the overall cost effectiveness of each scheme in pence spent per kilowatt of energy saving generated (where the smaller the pence per kilowatt figure, the more cost-effective the scheme was).

Table 6.1 - Scheme Summary

SCHEME REF	SCHEME TITLE	NISEP costs £	Accredited GWh	Carbon Tonnes	Gross Customer Benefit £
FIR 11 01 MP	Toasty Homes	846,408.88	30.122	5,834	1,790,418
FIR 11 02 MP	Toasty Homes Plus	352,336.19	7.277	1,463	477,321
NIEE 11 01 MP	Energy Saver Homes	1,566,493.34	32.436	6,723	4,218,948
NIEE 11 02 MP	Cosy Homes	528,327.18	37.816	7,867	3,036,001
NIEE 11 03 MP	Snug Plus	213,791.28	10.280	2,055	773,144
AIRT 11 02 MP	Energy Saver Plus	210,195.79	6.674	1040	480,479
BCG 11 01 H P	Bryson '21 Degrees'	98,465.40	0.905	45	36,900
H&A 11 01 HP	H&A '21 Degrees'	97,592.25	0.777	96	47,411

NIEE 11 04 I P	Free Insulation	2,022,114.87	210.941	34,205	19,204,995
NIEE 11 05 I P	Cosy Homes Insulation	120,645.00	12.728	1,992	1,079,037
NIEE 11 06 I P	H2T Solid Wall Insulation	357,041.25	5.724	955	418,019
NIHE 11 01 I P	Wood Pellet Boiler Scheme	179,564.20	3.421	8,230	72,924
AIRT 11 03 M NP	Energy Saver	139,064.78	40.579	7,095	2,870,055
ENA 11 01 O NP	Variable Speed Drives	71,015.02	53.835	9,535	8,091,349
ENA 11 02 O NP	High Bay Lighting	74,532.68	35.179	6,231	5,287,433
ENA 11 03 O NP	Florescent Lighting	12,186.67	5.485	971	824,339
ENA 11 04 O NP	Hysave Refrigeration Pump	18,555.47	8.372	1,483	1,258,333
ENA 11 05 O NP	Variable Speed Compressor	61,518.00	36.883	6,533	5,543,549
ENA 11 07 O NPI	Voltage Optimisation	1,423.16	0	0	0
FIR 11 03 NP	SME Offer	47,000.00	4.055	865	74,423
FIR 11 04 NP	Daisy Hill CHP	60,000.00	29.841	8,468	1,552,906
NIEE 11 09 I NP	Insulation Cashback	165,421.30	54.705	9,450	3,929,871
NIEE 11 10 O NP	Variable Speed Drives	109,451.36	49.926	8,843	7,503,829
NIEE 11 11 O NP	Refrigeration Package	1,561.14	0.599	101	89,976
AIRT 11 01 R NPR	Super Energy Saver	40,345.99	0.353	675	-8,035
NIEE 11 08 R NPR	Cosy Homes Solar Water Heating	1,000.00	0.013	3	1,161
NIEE 11 14 R NPR	Solar Water Heating	233,463.00	6.031	1,258	426,449
NIEE 11 15 R NPR	Solar PV	176,412.03	4.146	920	623,134
NIEE 11 12 I NPI	Commercial LED Lighting	59,387.22	17.744	2,808	2,666,875
NIEE 11 13 I NP	Solid Wall Insulation Cashback	16,938.33	0.557	75	38,931
	TOTALS	**£7,882,251.78**	**707.404**	**135,819**	**£72,410,175**

Figure 6.2 - Lifetime energy savings by category (GWh)

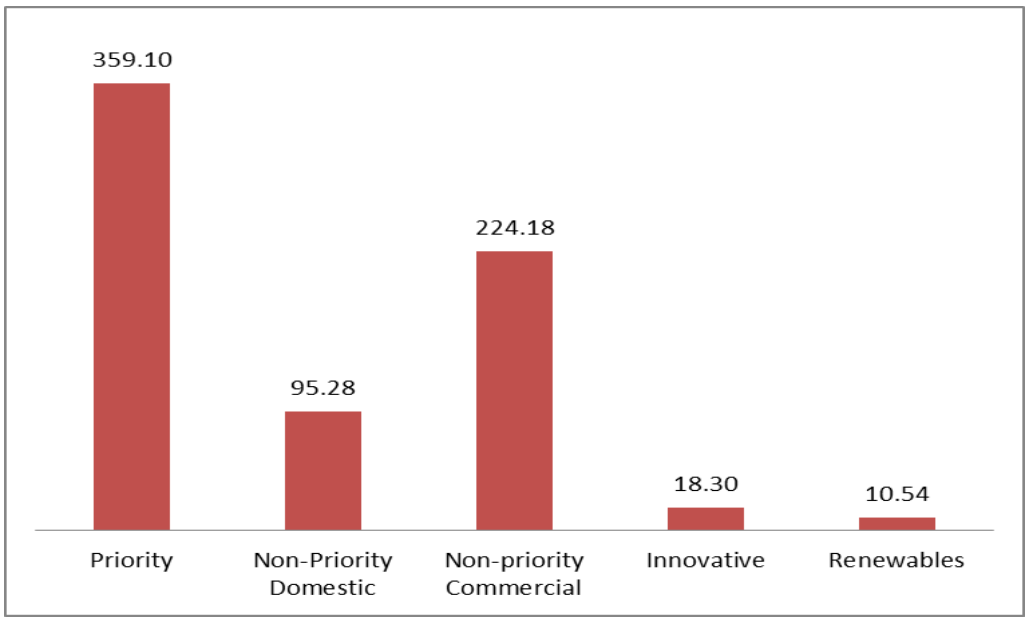


Figure 6.3 - Priority Scheme Cost Effectiveness (p/kWh) (*the lower the value, the more cost effective the scheme*)

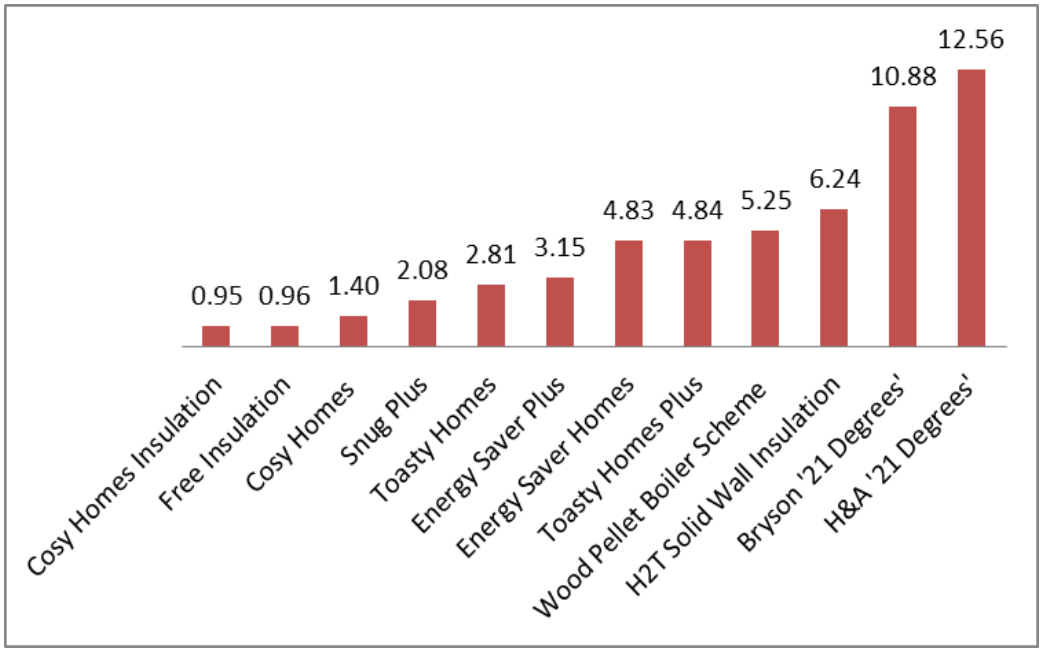
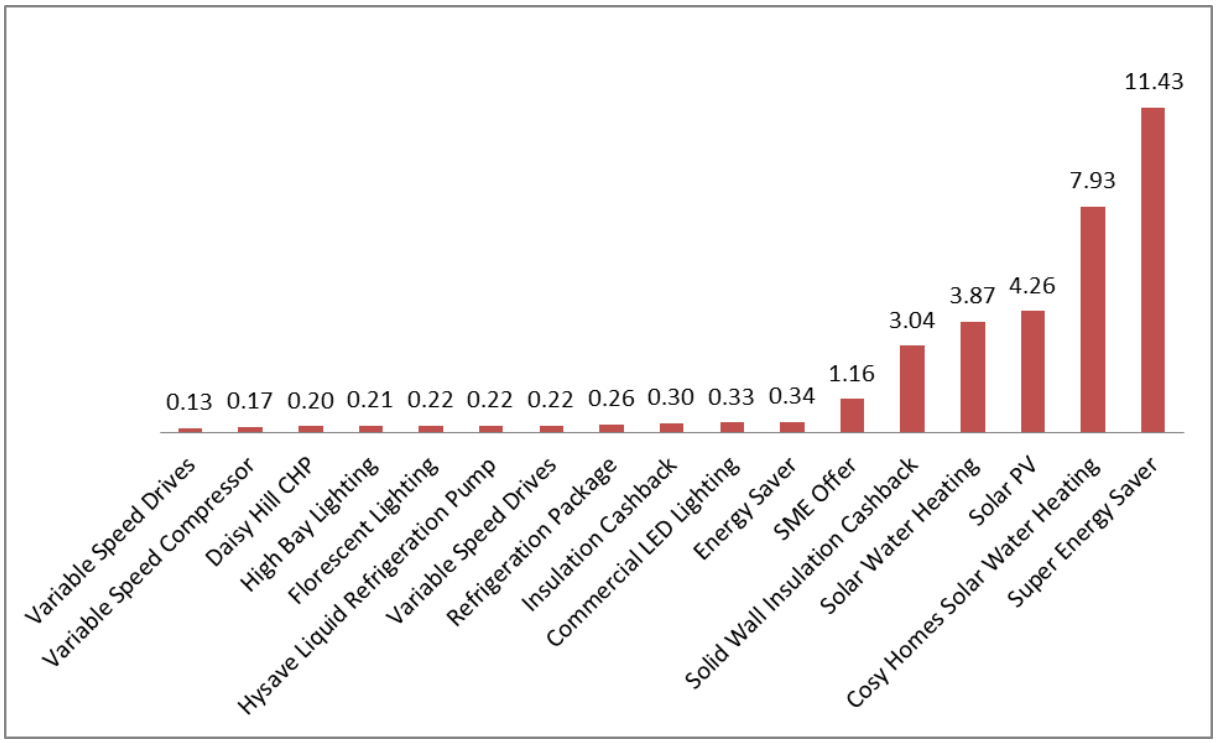


Figure 6.4 - Non-Priority Scheme Cost Effectiveness (p/kWh) (*the lower the value, the more cost effective the scheme*)



7. Target Achievement and Incentive Payments

In order to encourage Primary Bidders to bring forward cost-effective schemes and thereby ensure that the objectives of the NISEP are met, the Utility Regulator awards an incentive payment to Primary Bidders that exceed the energy saving targets set for each category of scheme. There is no incentive paid for simply meeting the target.

As a result of exceeding the GWh target, incentive payments were awarded to some Primary Bidders and the total of incentive payments was £245,718. This is summarised in table 6.1 below. Traditionally any incentive payments earned that are in excess of 8% of the total project costs have to be recycled into new energy efficiency and/or fuel poverty initiatives, however this year no scheme bidder received more than 8% of the total value of their project costs in incentives so there was no recycling of any surplus funds in 2011-12.

7.1 - Summary of Incentive Payments 2011-12

Primary Bidder	Amount spent (£)	Savings achieved (GWh)	Incentive earned (£)
Airtricity	389,607	47.606	-
Bryson Charitable Group	98,465	0.905	-
Energia	239,231	139.754	44,062
Firmus Energy	1,305,745	71.295	14,880
H&A Mechanical Services	97,592	0.777	-
HI Housing Executive	179,564	3.421	-
NIE Energy (now Power NI)	5,572,047	443.646	186,576
		TOTAL	**£245,518**

8. Geographical Spread of Measures

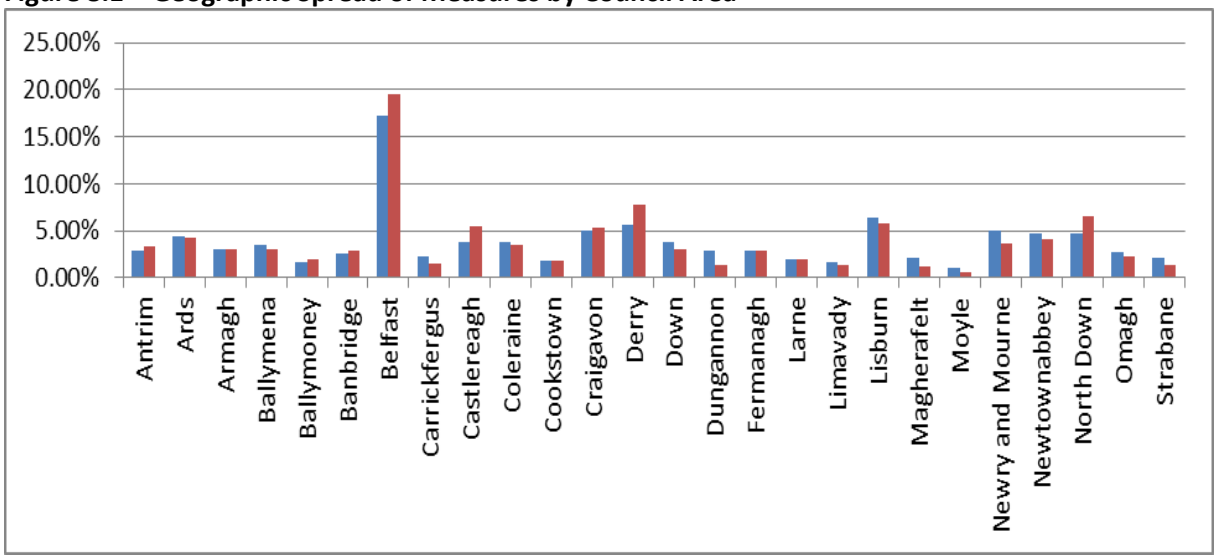
Data from domestic NISEP schemes is fed into the Energy Saving Trust's Home Energy Efficiency Database (HEED). This database records information from a variety of sources across the UK to create a picture of energy efficiency upgrades for individual properties.

Data from the 11-12 NISEP has been loaded into the database. Table 8.1 below shows the percentage of overall NISEP interventions per council area in red and the percentage of NI households there are in each council area in blue.

For NISEP to demonstrate good geographical spread across all council areas, both the blue and red bars should be roughly equal in height as both indicate the data as a % of the national total. Broadly speaking, there is a good spread of measures across all Council areas, however Dungannon's share of measures is markedly lower at around half the measures expected compared to others, and Council areas such as Castlereagh and Derry City are high.

Dungannon saw a low level of heating activity which may have contributed to its lower uptake of measures, and this could be due to the area being off-gas, which is also mirrored in other off-gas Council areas such as Omagh and Strabane. Castlereagh and Derry City are densely populated areas and therefore it is reasonable to assume that factors such as word of mouth or area based marketing could account for the higher percentage of interventions.

Figure 8.1 – Geographic Spread of Measures by Council Area



9. Comparison with previous year

The table below provides a comparison with last year's NISEP

Table 9.1 – Comparison with previous year's figures

	2011-12	2010-11
NISEP funding spent	**£7,882,252**	£6,197,318
Total lifetime energy savings	**707.404 GWh**	607.77 GWh
Carbon savings	**135,819 t**	123,457 t
Gross customer benefit	**£72,410,175**	£56,345,455
Total incentives earned	**£245,518**	£471,447

Overall spend and energy savings were increased this year and there has been a significant jump in gross customer benefits which is good news for those who benefit most from energy efficiency measures. Overall, the priority sector benefitted from just under 44% of the gross customer benefits, so while these schemes are traditionally the least cost effective, nearly half of the financial savings produced under NISEP are benefitting those in most need.

The total incentives earned this year are significantly less than the previous year as the calculation for earning incentives has been changed resulting in lower incentive payments .

10. Conclusions

NISEP scheme submissions were received from a range of Primary Bidders. In 2011-12 there was activity from new Primary Bidders such as Bryson Charitable Group and H&A Mechanical Services. The overall spend and energy savings achieved were up on the previous year. In total, there were 37,481 energy efficiency measures installed across priority and non-priority schemes, including 1,704 new heating systems.

The broad aims of NISEP have been met with interventions resulting in more energy efficient homes and businesses, while balancing the social need of vulnerable customers within the split of domestic and commercial schemes. The gross customer benefit total translates as one pound of NISEP funding provided this year provided £9.19 of long term energy savings. The economic climate continues to impact on the success of some of the commercial schemes with a number of them being less

successful than had been hoped as a result of the reduction in capital expenditure available within the sector as a whole.

Feedback from recipients of measures funded by NISEP is always positive, and below is a snapshot of some customer testimonials.

Energy Saver Homes Customers
"Thank you for this scheme. My old system was obsolete and I could not have afforded to replace it."
"I would just like to say thank you as this has made a tremendous change to my health and well being."

Snug Plus Customers
"Without this programme we would not have been able to afford this so it was deeply appreciated."
"The Snug Plus scheme is great. The scheme swayed me to make my decision to change to gas and get properly insulated."
"I would recommend the Snug Plus scheme to any pensioners as it has been a great help to us."
"I must thank you for your help with the process, we could not have gone through the winter without heating."

Free Insulation Customers
"I have used less oil so far as the heat stays in longer."
"The house retains heat for longer periods of time and this should result in a saving of my energy bills."
"The insulation you put in is a great success, fill of oil does me longer, thank you."

Appendix 1: Summary of participating NISEP schemes

PRIORITY SCHEMES

FIR 11 01 MP Toasty Homes

This was priority whole-house solution scheme providing a package of measures to dwellings within the firmus energy gas network. The occupants had to be deemed 'vulnerable' and have no central heating or an old LPG or oil system (over 15 years old), Economy 7, or solid fuel heating.

The offer comprised a £1500 cash back towards a new natural gas heating system and up to £800 for insulation measures. In addition 4 CFLs and an energy monitor were offered to each household.

Measures Summary

Loft Insulation	342
Cavity Wall Insulation	33
Replacement Heating	562
Low Energy Lights	1920
Hot Water Cylinder Jacket	3
Energy Monitors	549

FIR 11 02 MP Toasty Homes Plus

This was fully funded priority whole-house solution scheme providing a package of measures to dwellings within the firmus energy gas network. The occupants had to be deemed 'vulnerable' and have no central heating or an old LPG or oil system (over 15 years old), Economy 7, or solid fuel heating. There was no financial contribution made by the applicant.

The offer included the installation of a new fully controlled heating system using natural gas condensing boilers or condensing combination boilers plus insulation measures. The insulation measures included hot water cylinder jacket, cavity wall insulation and/or loft insulation upgraded to 270mm (up to the value of £800).

In addition 4 CFLs and an energy monitor were also supplied.

Measures Summary

Loft Insulation	60
Cavity Wall Insulation	4
Replacement Heating	115
Low Energy Lights	436
Hot Water Cylinder Jacket	4
Energy Monitors	112

NIEE 11 01 MP Energy Saver Homes

This scheme targeted vulnerable householders with no heating, Economy 7 or solid fuel heating and eligible customers were provided a new energy efficient heating system (gas if on the network, or oil if not) and a package of insulation measures up to the value of £800. Each property also received four energy efficiency light bulbs.

Measures Summary

Loft Insulation	101
Cavity Wall Insulation	26
Replacement Heating	365
Low Energy Lights	1460
Hot Water Cylinder Jacket	4

NIEE 11 02 MP Cosy Homes

The aim of this scheme was to install energy efficient heating and insulation measures in Housing Association properties and therefore raising the standard of heating systems and the thermal quality of homes in the HA stock.

NIE Energy (now Power NI), working with the Bryson Energy as the scheme manager, has for a number of years successfully operated this scheme. It has been so successful over the years that the Fuel Poverty Strategy for NI quoted the significant benefits of the scheme to Housing Associations.

A grant maximum of £1000 was offered for heating and £150 towards insulation and each property received two CFLs and each tenant also received in-home energy saving advice.

Measures Summary

Loft Insulation	213
Replacement Heating	463
Low Energy Lights	926
Hot Water Cylinder Jacket	70

NIEE 11 03 MP Snug Plus

This scheme was aimed primarily at working fuel poor households that have no heating, Economy 7, solid fuel or old oil systems (over 15 years old). It offered the opportunity to install a highly efficient, fully controlled natural gas heating system at a substantial discount and receive a free insulation upgrade.
The scheme offered a cashback of £1,500 towards the cost of heating and up to £800 for insulation measures and a cylinder jacket. 121 received interventions.

Measures Summary

Loft Insulation	50
Cavity Wall Insulation	18
Replacement Heating	121
Low Energy Lights	484
Hot Water Cylinder Jacket	1

AIRT 11 02 MP Energy Saver Plus

This was a priority, mixed individual measures scheme, run in partnership with the Northern Ireland Housing Executive (NIHE). The scheme was intended to improve loft insulation to 270mm in depth and install a range of other energy efficiency measures such as compact fluorescent lamps and appliance standby shut off devices.

The NIHE identified the properties to have the loft insulation top ups and Airtricity co-ordinated the installation work and all other aspects of the scheme. Due to the high percentage of houses using oil fired central heating and the desire to keep the indirect costs of the scheme to a minimum, the

scheme targeted homes with oil fired central heating. There was no cost to the recipients for the measures involved in this scheme and where it was deemed appropriate, energy monitors were also be provided to customers to assist them with monitoring and management of the household's electricity consumption.

The costs for treating NIHE properties (despite the addition of loft hatch insulation and draft stripping etc.) proved to be less than budgeted for. Less add-on measures were installed than anticipated, due to customers not requiring or not wishing to avail of them, resulting in more of the funding being spent on insulation which improved the overall cost effectiveness.

Measures Summary

Loft Insulation	553
Low Energy Lights	1
Energy Monitors	4
Stand-by Meters	67

BCG 1101 H P Bryson 21 Degrees

This was a 'heating only' individual measures scheme. The scheme will be aimed at priority customers on low incomes and was designed in such a way that it complemented the existing government provision of the Warm Homes Scheme.

Given Bryson Charitable Group's work on the Government's Warm Homes scheme, this was a good fit and enabled Bryson to offer unsuccessful Warm Homes heating applicants an alternative package of measures.

21 Degrees installed 26 heating systems replacing 25 old inefficient oil systems and one Economy 7 system. An in-year scheme variation gave approval for 23 systems. Overall cost effectiveness was affected by a lower number of electric properties being converted.

Measures Summary

Replacement Heating	26

H&A 11 01 HP H&A 21 Degrees

H&A Mechanical Services provided an identical scheme to Bryson Charitable Group but operated it in their own Warm Homes 'territory' in the Northern half of the country, offering unsuccessful Warm Homes heating applicants an alternative package of measures.

The H&A 21 Degrees scheme replaced 18 old inefficient oil systems with new oil ones, 10 old oil ones with gas systems and one Economy 7 system with gas.

Measures Summary

Replacement Heating	29

NIEE 11 04 I P Free Insulation

The aim of this scheme is to install insulation measures in vulnerable households. Eligible houeholders were offered a package including cavity wall insulation, full loft insulation (up to 300mm), hot water cylinder jacket and four energy saving light bulbs. The maximum value of the grant available to customers was £800.

Free Insulation provided 100% funding and referrals were generated through a range of referral partners including Energy Saving Trust advice centre, NEA, Northern Investing for Health council

areas and Power NI. The scheme was promoted on the Power NI website with customers able to register online along with bill inserts and radio advertising.

As funding was allocated early in the year, additional funding was secured through DARD to target low income, fuel poor households in rural areas. This additional £390,000 allowed for around 578 extra jobs to be completed.

Measures Summary

Loft Insulation	3699
Cavity Wall Insulation	1405
Low Energy Lights	16676
Hot Water Cylinder Jacket	1538

NIEE 11 05 I P Cosy Homes Insulation

The aim of this scheme was to install cavity wall and loft insulation in Housing Association properties.

A grant £150 towards each of the insulation measures was provided and each property also received two CFLs and each tenant was given energy saving advice.

The Cosy Homes scheme has operated for several years as a partnership between NIE Energy and the Northern Ireland Energy Agency. The scheme offered 750 insulation grants

Measures Summary

Loft Insulation	702
Cavity Wall Insulation	48
Low Energy Lights	1500

NIEE 11 06 I P H2T Solid Wall Insulation

The aim of this scheme was to target harder to treat homes with a package of loft insulation and solid wall insulation. This scheme was aimed at low income customers.

Feedback from this project showed that by upgrading insulation to the correct standards and installing solid wall insulation made homes measurably more comfortable for families on low incomes and daily routines become more manageable. Households also reported highly significant changes in thermal comfort both summer and winter.

H2T Solid Wall Insulation provided 100% funding to install internal or external solid wall insulation in vulnerable customers' homes who met the agreed criteria. Referrals were generated through a range of referral partners including Energy Saving Trust advice centre, NEA, Northern Investing for Health council areas etc. In total 60 households benefited from the scheme.

Measures Summary

Loft Insulation	14
Solid Wall Insulation	60
Low Energy Lights	240
Hot Water Cylinder Jacket	5

NIEE 11 07 I P Cosy Homes Biomass Boilers

The aim of this scheme was to install biomass boilers in housing association properties. Unfortunately there was no uptake of this scheme. Due to the demand for the Energy Saver Homes scheme, funding was transferred across to that scheme.

NIHE 11 01 I P Wood Pellet Boiler Scheme

The Housing Executive's current heating policy is to replace coal fired heating with gas heating, where gas is available, and to install oil heating elsewhere. However, in some NIHE heating replacement schemes, as many as 40% of tenants are refusing to give up their coal fires and accept an oil heating system.

Many of these refusals are due to fears around budgeting for an oil delivery where a large upfront payment is required rather than the modest weekly payments they are used to. They also fear potential future oil prices shocks. In some of these cases, their fears would be alleviated if they were provided with a wood pellet boiler where the fuel is available in smaller quantities, such as fortnightly or monthly deliveries of 10kg bags. In the end 23 homes received measures

Measures Summary

Biomass Boilers	23

NON-PRIORITY SCHEMES

AIRT 11 03 M NP Energy Saver

This was a mixed individual measures scheme to install loft and cavity wall insulation in Non-Priority homes. A range of other energy efficiency measures such as hot water cylinder jackets, compact fluorescent lamps, draft stripping, chimney balloons and appliance standby shut off devices were also offered.

Customers were offered a 'cash-back' deal on both the loft and cavity wall insulation. A minimum installation value of £250 applied for insulation work to qualify for the cash-back deal, with the customer receiving a maximum refund on their installed costs of £150.

Fewer add-on measures were installed due to customers not requiring or having no interest in them so this allowed for more insulation jobs to be carried out.

Measures Summary

Loft Insulation	207
Cavity Wall Insulation	594
Low Energy Lights	2
Hot Water Cylinder Jacket	2

ENA 11 01 O NP Variable Speed Drives

Electric Drives are extensively used in most industrial business premises. Due to the low installation cost, single speed motors have been the preferred choice with customers. This scheme targeted Industrial/Large Commercial Users in Northern Ireland with the aim of installing 'Variable Speed Units'. The installation of this inverter technology on electric motors results in substantial energy savings through reducing motor speeds. Seven companies applied for funding and met the criteria set for the scheme, with NISEP contributing, on average, 29% of the total project costs.

Measures Summary

Variable Speed Drives	7

ENA 11 02 O NP High Bay Lighting

This scheme helped fund the replacement of metal halide high bay installations with low energy compact fluorescent/ T5 luminaires with daylight and occupancy sensors in Industrial/Warehouse Business Premises. Thirteen companies with 18 schemes met the criteria set and on average NISEP funding contributed 22% of the total project costs.

Measures Summary

Low Energy Lights	3533

ENA 11 03 O NP Florescent Lighting

The fluorescent lighting scheme replaced T12/T8 fluorescent light fittings with low energy linear compact fluorescent/T5 luminaires and integrated daylight/occupancy sensors or LED tubes in industrial and commercial premises. In all, 8 companies (covering 9 separate schemes) met the criteria and availed of at least 20% funding towards the installation costs of the replacement lighting.

Measures Summary

Fluorescent Lighting	1109

ENA 11 04 O NP Hysave Liquid Refrigeration Pump

Liquid Refrigerant Pumping Technology for Industrial/Commercial Refrigeration and Air Conditioning Units. Hysave liquid refrigerant pumping technology is used to reduce the compressor energy consumption on refrigeration and air conditioning plants. This technology is utilised in premises where there is no requirement for heat recovery. Overall four schemes were funded, which was lower than the anticipated 17 proposed installations.

Measures Summary

Hysave	4

ENA 11 05 O NP Variable Speed Compressor

Replacing a single speed compressor with a new 'variable speed compressor' taking advantage of the substantial energy savings achieved reducing motor speed. Nineteen companies applied for twenty schemes and met the criteria set. On average NISEP funding contributed 20% of the total project cost.

Measures Summary

Variable Speed Compressors	20

ENA 11 07 O NPI Voltage Optimisation

Voltage Optimisation, also known as 'voltage regulation', 'voltage stabilization' or 'voltage control' is an energy-saving technique that controls and reduces the voltage supplied to a site in order to save electricity. Unfortunately there was no uptake for this scheme and therefore no installations were carried out. The funding for this scheme was then reallocated to the High Bay Lighting and Variable Speed Compressor schemes.

FIR 11 03 NP SME Offer

This - non-domestic scheme provided a central heating package for small industrial and commercial customers who are sole traders converting from oil, Economy 7, LPG or premises with no central heating. The offer was for £1000 cash back upon conversion to a fully controlled natural gas heating system. Forty seven businesses availed of the grant.

Measures Summary

Heating Systems	47

FIR 11 04 NP Daisy Hill CHP

The hospital was looking at ways to save energy and carbon emissions due to additional costs being added under the Carbon Reduction Commitment.

Combined Heat and Power (CHP) was deemed the most suitable option for the site as it provides both electricity and heat to the hospital site which encompasses hospital buildings as well as residential nurses accommodation. NISEP contributed 20% to the cost of installing the CHP unit.

Measures Summary

CHP unit	1

NIEE 11 09 I NP Insulation Cashback

This scheme was aimed at owner occupiers primarily to help encourage the installation of cavity wall and/or loft insulation. A cashback of £150 was available for cavity wall insulation and a £150 cashback will be available for full loft insulation. The scheme was very successful with 864 households availing of the cashbacks.

Measures Summary

Loft Insulation	358
Cavity Wall Insulation	649

NIEE 11 10 O NP Variable Speed Drives

This scheme provided customers with a grant towards a range of variable speed drive options including motors for ventilation, water circulation, air compressors and controls upgrades. In total 40 grants were offered to a range of local SMEs including O'Neills Mushrooms, NI Trucks, Wright Accident Repair and Belfast Health and Social Care Trust. The scheme was developed in partnership with and managed by Low Carbon Solutions. Grant levels were calibrated according to the predicted energy savings for the size and running hours of the VSD to ensure that the scheme achieved the cost effectiveness forecast.

Measures Summary

Variable Speed Drives	40

NIEE 11 11 O NP Refrigeration Package

The aim of the scheme was to stimulate the up-take of energy efficient measures such as refrigeration covers and LED lighting in the retail refrigeration sector of Northern Ireland. Refrigerators have to be kept on 24/7, and by introducing covers on refrigerators, when the stores are closed, energy consumption can be reduced by 10-20%.

Despite an initial high volume of interest in the scheme from refrigeration manufacturers and local SMEs, only one application was received and the remainder of the funding was transferred to other schemes.

Measures Summary

Refrigeration Package	1

AIRT 11 01 R NPR Super Energy Saver

This was a whole house scheme, which was intended to replace central heating boilers with air-source heat pumps. The heat pump range that was selected can be retrofitted to existing central heating systems.

Depending on the thermal needs of the house a range of other energy efficiency measures could also be offered, such as loft and cavity wall insulation, hot water cylinder jackets, compact fluorescent lamps, draft stripping, chimney balloons and appliance standby shut off devices. Energy monitors were also offered to customers to assist them with monitoring and management of the heat pump and general household electricity energy consumption.

Measures Summary

ASHP	17

NIEE 11 08 R NPR Cosy Homes Solar Water Heating

The aim of this scheme was to install solar water heating systems in Housing Association properties. Installations of retrofit solar water heating systems on housing association properties have been few.

This scheme provided a grant of £1000 for Housing Associations to install solar water heating within their properties across Northern Ireland. Up to 50 grants were available with interested housing associations having to apply directly to Power NI. Bryson Energy, who manage the Cosy Homes scheme, also helped to identity interested housing associations. In total only one grant proceeded.

Although there was initial interest in the scheme from a number of Housing Associations, only one installation took place. Reasons for such a low uptake on the scheme include unsuitable properties, housing associations not having additional funds to contribute to the cost and some installations unable to be completed within the time scale. A scheme variation was completed in early in the year to allow funding to be reallocated to other schemes.

Measures Summary

Solar Water Heating	1

NIEE 11 14 R NPR Solar Water Heating

This solar water heating scheme provided a grant of £600 towards the cost of installing a domestic solar water heating system. This grant followed on from the successful NIE Smart Programme which previously provided grant support. Installations were carried out by a range of MCS installers using MCS approved products. The scheme was promoted via the Power NI website and local installers. A total of 347 grants were issued.

Measures Summary

Solar Water Heating	347

NIEE 11 15 R NPR Solar PV

This Solar PV scheme for non priority properties provided support of 20% (up to a maximum of £5,000) towards installing a PV system. In total, 265kWp of PV was successfully installed throughout the year with 65 householders benefiting. System sizes ranged from 1.17kW to 10kW. Installations were carried out by a range of MCS installers using MCS approved products. The scheme was promoted through the Power NI website as well as a network of MCS approved installers across Northern Ireland,

The scheme proved more successful than anticipated with 265kWp of PV being installed compared to the expected 149kWp. Due to the grant being offered and the competitive price of PV, customers were installing larger systems with the average system size being 4.1kWp vs the average installation size anticipated of 2.5kW.

Measures Summary

Solar PV	265

NIEE 11 12 I NPI Commercial LED Lighting

This scheme promoted the uptake of LED lighting in the commercial sector with a focus on small SMEs and the hospitality sector, as for many SMEs and hotels, lighting counts for a significant element of energy costs. Following on from last year's scheme there was a growing demand for the offer with grants of 20% provided to a range of businesses across Northern Ireland. The grant was promoted via the Power NI website and a number of local LED installers and suppliers.

In total 49 applications were received resulting in 13,103 LED bulbs being installed across Northern Ireland.

Measures Summary

LEDs	13,103

NIEE 11 13 I NP Solid Wall Insulation Cashback

The solid wall insulation cashback scheme provided funding of up to 25% towards the cost of installing either internal or external solid wall insulation. Power NI worked in partnership with the National Insulation Association to identify potential solid wall installers. A number of local companies were selected to participate in the scheme with other installers coming on board throughout the offer. The scheme was promoted through the Power NI website, Energy Saving Trust advice centre and the local installers registered to participate in the scheme.

There was more interest in the scheme this year, compared to last year, with 7 cashbacks issued. Despite only 7 cashbacks being issued, there was a lot of interest in the scheme but due to the high cost and disruption during installation a large number of customers cancelled their applications. A scheme variation was completed during the year to transfer funds to other schemes where there was greater demand.

Measures Summary

Solid Wall Insulation	7