



Northern Ireland Sustainable Energy Programme Annual Report 2010-11

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 2010-11, outlining the measures installed, financial benefits to beneficiaries and the energy (GWh) and carbon savings associated.

For 2010-11 the average NISEP customer contribution was £8.61 per electricity customer across approximately 840,800 domestic and business customers. This equated to an overall fund of £7,235,413. When combined with underspend from previous years, the total allocated to NISEP schemes this year was £7,407,741 of which £6,197,318 was spent.

In total, 19 of 21 approved schemes ran and this year's underspend can be seen as a result of a number of factors. For example; commercial schemes that had a lower uptake of measures than was predicted, some commercial installations, while viable, did not proceed in-year and in the domestic sector, NIE Energy's insulation cash-back was less successful than in previous years due to a similar incentive being launched by Land and Property Services which offered a more favourable incentive than what was available from the NIE Energy scheme. Table 1 below gives the headline achievements for 2010-11.

Table 1 – Summary Outrun savings

Total lifetime energy savings	607.77 GWh
Carbon savings	123,457 tonnes
Gross Customer Benefit	£56,345,455
Total incentives earned	£471,447

2. Introduction

The NISEP continued to focus on vulnerable customers (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 (walls and roof) 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. Unlike previous years, no additional 'top-up' of *Warm Homes* was made available due to wider changes in the Warm Homes scheme, however schemes were submitted to help support households that fell just outside of *Warm Homes* eligibility.

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

- insulation 'cash-back' offers for insulation in the domestic sector
- variable speed drives and variable speed compressors
- energy efficiency lighting (including LED systems)

In 2010-11, 21 schemes were successful in receiving funding, of which 19 ran and were subsequently completed during the year. Overall, some of the commercial schemes were less successful in terms of spend than had been predicted and this needs to be reflected within the current economic climate where capital spend in the business sector would appear to have dropped and thus impacted on the number of individual commercial grants that were issued. The tables below summarises the number of schemes per bidder and schemes per category

Table 2.1 - Summary of schemes by Primary Bidder

Energia	6
ESB Independent Energy (ESBIE)	1
firmus energy	3
NIE Energy (now Power NI)	8
Phoenix Supply Ltd.	1

Table 2.2 – Breakdown of successful schemes by category

Priority Schemes	8
Non-priority domestic	1
Non-priority commercial	9
Non-priority innovative	1

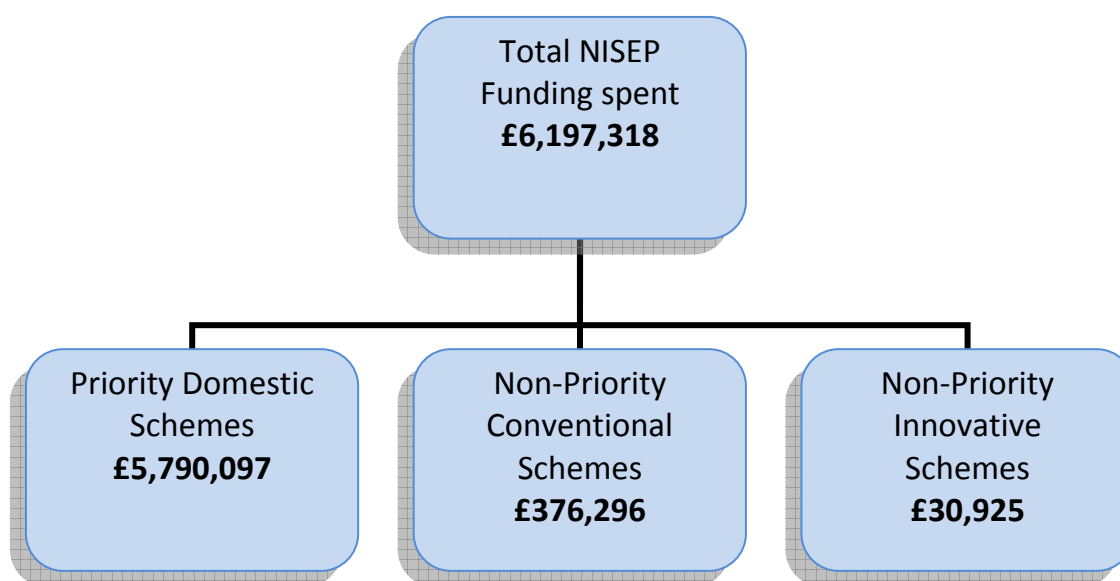
New for 2010-11 was the 'Non-priority Innovative' category which was introduced to allow schemes which address hard to heat homes, schemes which help to bring forward new but proven domestic or commercial technologies and schemes which provide renewable technologies but which may, due to the equipment involved, not be as cost-effective as other products but nonetheless are both well suited and in the long-term may be mainstreamed in the portfolio of energy saving products. In 2010-11 there was one

innovative scheme for LED lighting and one for domestic solid wall insulation that were given funding (though due to lack of uptake, the solid wall scheme did not run).

3. NISEP 2010-11 Funding Spend Breakdown

Table 3.1 below shows how the NISEP funds spent were split between each funding category in 2010-11.

Table 3.1 - NISEP Breakdown of Funding Spent



4. Utilisation of NISEP Funding 2010-11

Table 4.1 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 4.1 Scheme Summary

SCHEME REF	SCHEME TITLE	NISEP costs £	Accredited GWh	Carbon Tonnes	Gross Customer Benefit £
FIR 10 02 P	Toasty Homes Plus	138,153	2.72	575	102,710
FIR 10 03 P	Toasty Homes	438,063	16.55	3,396	710,787
NIEE 10 01 M P	Cosy Homes	598,133	37.65	7,942	1,522,044
NIEE 10 02 M P	Energy saver Homes	890,590	22.44	4,759	1,023,797
NIEE 10 03 M P	Snug Plus	134,266	14.77	3,137	695,284
NIEE 10 04 I P	Free Insulation	3,154,899	305.17	60,721	28,207,004
NIEE 10 05 I P	Cosy Homes Insulation	152,643	22.41	4,267	2,515,042
PSL 10 01 MP	Phoenix Snug Plus	283,350	24.86	5,281	1,071,569

ENA 10 01 O NPC	Variable Speed Drives	2,583	2.42	516	276,107
ENA 10 02 L NP	High Bay Lighting Enhancement	77,256	33.66	7,190	3,847,605
ENA 10 03 L NP	Fluorescent Lighting Enhancement	37,564	12.85	2,744	1,468,424
ENA 10 04 O NP	Hysave 'Liquid pump amplification' for refrigeration	17,997	5.48	1,171	823,815
ENA 10 05 O NP	Variable Speed Compressors	36,055	11.10	2,371	1,668,703
ENA 10 06 O NP	Sonic Leak Detection	13,650	16.13	2,979	1,874,899
ESB 10 01 L NP	Energy Efficient Lighting	9,047	4.24	906	637,597
FIR 10 01 NPC	SME Offer	50,000	4.37	685	459,022
NIEE 10 06 I NPD	Insulation Cash-back	51,137	20.40	4,333	1,843,530
NIEE 10 08 O NPC	Variable Speed Drives	81,007	38.26	8,173	5,751,075
NIEE 10 09 L NPC	SME Lighting	0	0.00	0	0
NIEE 10 11 L NPI	Commercial LED Lighting	30,925	12.29	2,311	1,846,441
NIEE 10 12 I DHTT	Solid Wall Insulation	0	0.00	0	0
TOTALS		6,197,318	607.77	123,457	56,345,455

Figure 4.1 - Lifetime energy savings by category (GWh)

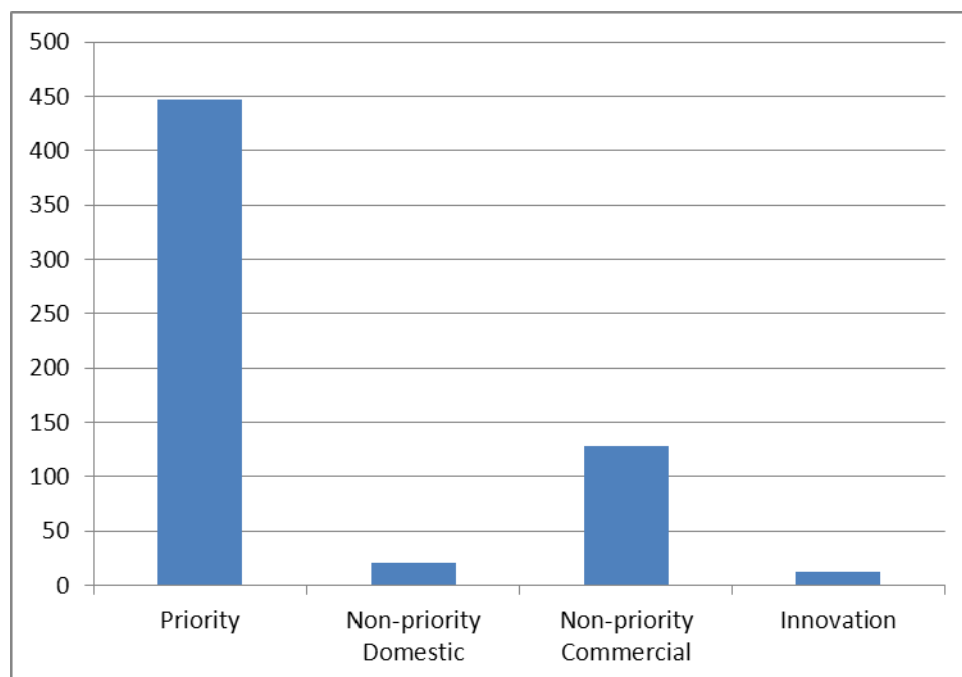


Figure 4.2 - Priority Scheme Cost Effectiveness (p/kWh)

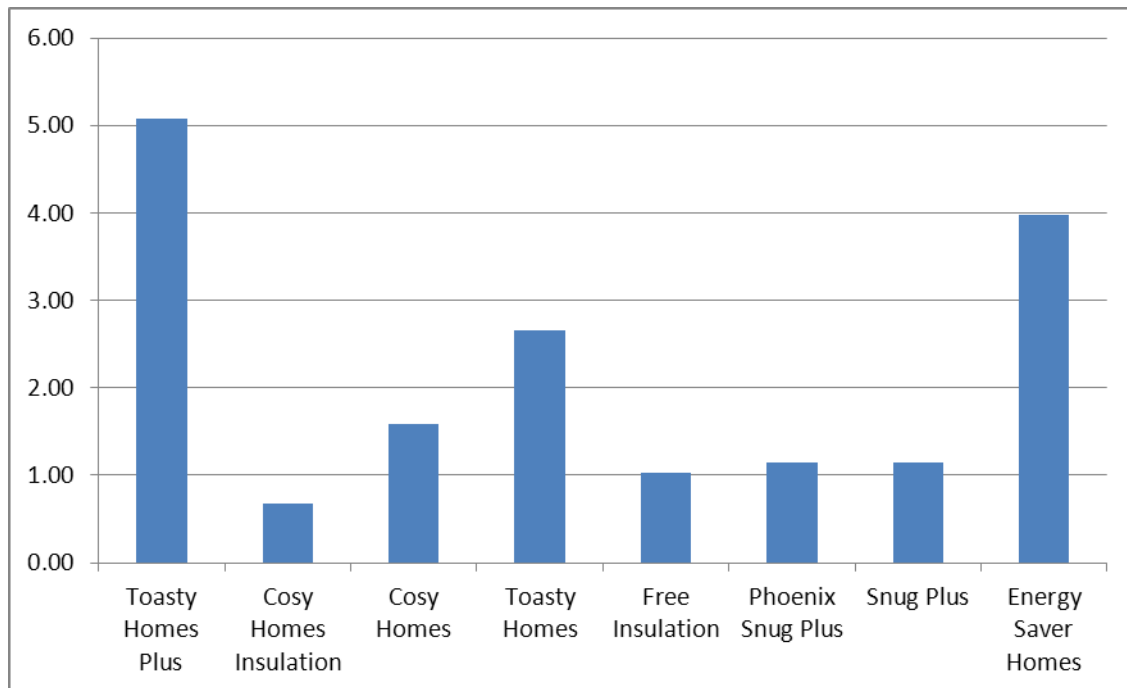
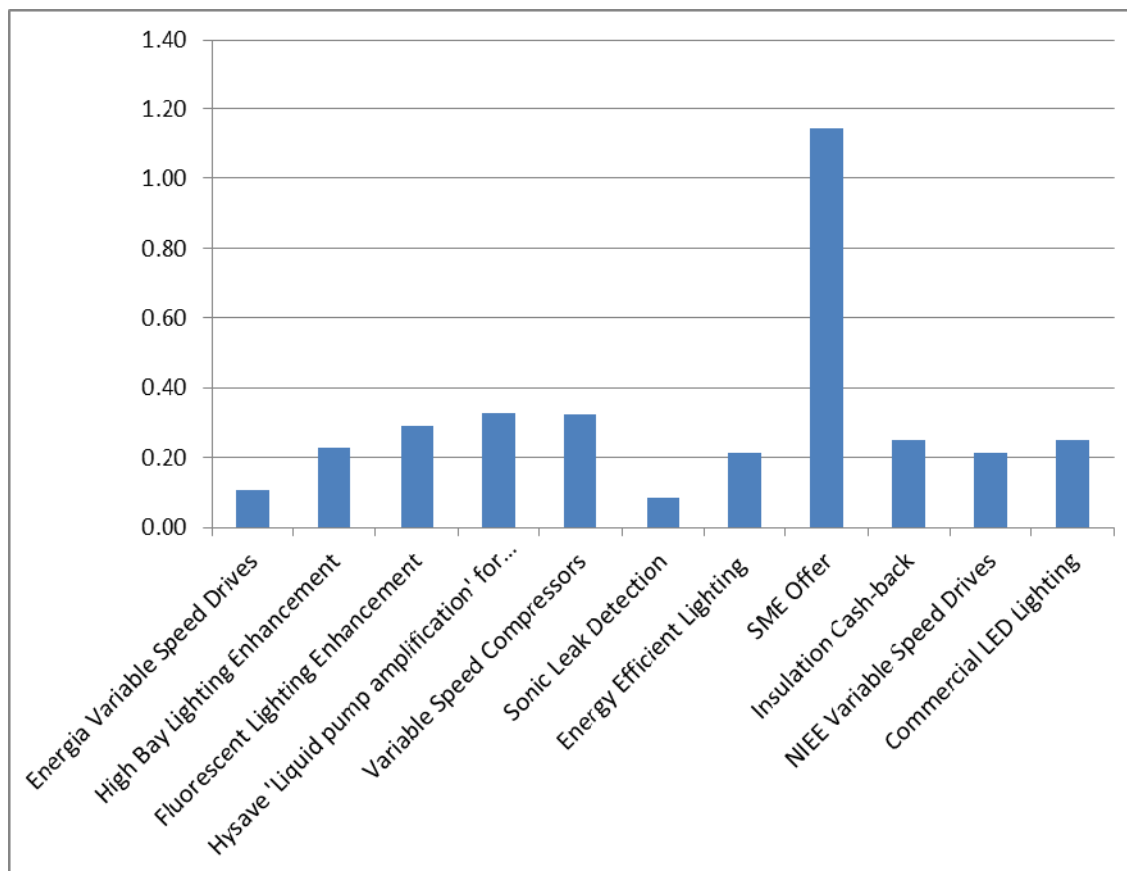


Figure 4.3 - Non-Priority Scheme Cost Effectiveness (p/kWh)



5. Target Achievement and Incentive Payments

The overall energy saving target (taking into account the amount spent and the target cost effectiveness of different types of schemes) was 320.692GWh. The actual saving achieved was 607.77 GWh, a significant increase against the target. It is always expected that the participating suppliers will strive to exceed the target and thus earn incentive payments.

As a result of exceeding the GWh target, incentive payments were awarded to some Primary Bidders and the total of incentive payments was £471,447. This is summarised in table 5.1 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 2010-11.

5.1 - Summary of Incentive Payments 2010-11

Primary Bidder	Amount spent (£)	Savings achieved (GWh)	Incentive earned (£)
Energia	185,105	81.637	14,570
ESBIE	9,047	4.242	964
firmus energy	626,216	20.594	16,808
NIE Energy	5,093,600	465.817	423,735
Phoenix Supply Ltd.	283,350	11.533	15,370
TOTAL			471,447

6. Extent of Priority Funding

Of the £6,197,318 spent on schemes, £5,790,097 was spent on Priority Sector schemes (those targeted at households most at risk of fuel poverty), representing 93% of the total funding spent. This figure is well in excess of the ring fenced 80% and is due to non-priority schemes only spending 27% of the funding allocated to them whereas 98% of the priority funds were spent. Energy savings of 446.57 GWh in the priority sector represents 73% of the overall energy savings. This equates to a lifetime customer benefit of £35,848,237 for the most vulnerable households in Northern Ireland.

In total, priority funding provided for 37,565 energy efficiency interventions ranging from low energy light bulbs to new high-efficiency gas condensing boilers. Table 6.1 shows a breakdown of priority measures and Table 6.2 shows the breakdown of heating system installations.

Table 6.1 – Summary of Priority Measures Installed

Loft insulation	7,383
Cavity wall insulation	2,654
Low energy lighting	22,928
Hot water cylinder jackets	2,135
Standby controls	1,000
'Shower smart' systems	76
Heating Replacements	1,389
TOTAL	37,565

Table 6.2 – Summary of Heating Replacements

Economy 7 to gas	602
Economy 7 to oil	15
Solid fuel to gas	199
Solid fuel to oil	65
LPG to gas	15
Oil to gas	313
No heating to gas	57
No heating to oil	123
TOTAL	1,389

7. Comparison with previous year

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

Table 7.1 – Comparison with previous year's figures

	2010-11	2009-10
NISEP funding spent	£6,197,318	£5,589,748
Total lifetime energy savings	607.77 GWh	708.91 GWh
Carbon savings	123,457 tonnes	142,765 tonnes
Gross Customer Benefit	£56,345,455	£61,760,474
Total incentives earned	£471,447*	£1,722,277

*there was a different metric to calculate incentives introduced for 2010-11, to reduce the amount of incentive Primary Bidders could earn.

It is worth noting that despite greater spend, the overall energy savings are less in 2010-11 than the previous year, this can be accounted for in the mix of measures installed, where in previous years there were greater numbers of electric heating systems being displaced by new gas and oil systems, which yields a much larger energy saving than 'boiler to boiler' replacements. This is most likely to continue in future years as the overall number of electric systems still being used reduces and therefore the carbon saving potential also reduces.

8. Conclusions

NISEP scheme submissions were received from a range of gas and electricity suppliers. In 2010-11 there was continued involvement of last year's newcomers Firmus Energy and ESBIE. The overall energy savings achieved against spend and target cost effectiveness were

broadly in excess of what was expected after in-year Scheme Variations were taken into consideration. In total, across both domestic and commercial schemes, there were 40,643 interventions including 1,389 new heating systems. The economic climate has perhaps impacted 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.

Appendix 1: Summary of participating NISEP schemes

PRIORITY SCHEMES

FIR 10 02 P Firmus Toasty Homes Plus

This was a 100% funded heating scheme, where old systems were replaced by new gas systems. Outrun figures showed a variance in carbon savings due to fewer *Economy 7* systems being replaced than was anticipated. All customer feedback forms returned reported that the work was on an 'excellent' standard. Funding of £47,524 was transferred in-year from Toasty Homes which did not have as high uptake.

Measures Summary

Loft Insulation	21
Cavity Wall Insulation	2
Replacement Heating Systems	40
Low Energy Lighting	0
Hot Water Cylinder Jackets	0
Other Measures	0

FIR 10 03 P Firmus Toasty Homes

This scheme utilised a small customer contribution as well as NISEP funds and 311 homes were upgraded through this scheme, with around two thirds receiving both insulation and heating system replacements. Again, there was a shortfall in anticipated carbon savings due to less *Economy 7* systems being replaced and due to less than expected uptake, £47,524 was transferred in-year to Toasty Homes Plus.

Measures Summary

Loft Insulation	210
Cavity Wall Insulation	9
Replacement Heating Systems	311
Low Energy Lighting	1,168
Hot Water Cylinder Jackets	2
Other Measures	0

NIEE 10 01 M P NIE Energy Cosy Homes

This scheme has run successfully for a number of years and is targeted at housing associations to upgrade insulation and heating within their own stock. There was lower uptake of cavity wall insulation than expected due to a number of properties identified having either solid walls or already having cavity wall insulation.

Measures Summary

Loft Insulation	331
Cavity Wall Insulation	49
Replacement Heating Systems	500
Low Energy Lighting	1,000

Hot Water Cylinder Jackets	51
Other Measures	0

NIEE 10 02 M P NIE Energy Energy Saver Homes

This fully-funded scheme provided a whole-house energy efficiency package of heating, insulation, and other energy efficiency measures. Again, fuel mix caused a variance in final outrun energy savings. This was a popular scheme and was topped up in-year with funds from another scheme that was underperforming.

Measures Summary	
Loft Insulation	101
Cavity Wall Insulation	28
Replacement Heating Systems	221
Low Energy Lighting	884
Hot Water Cylinder Jackets	5
Other Measures	0

NIEE 10 03 M P NIE Energy Snug Plus

This scheme targeted vulnerable customers with Economy 7, solid fuel systems or no central heating. It offered a partial grant for the heating system installation rather than the full cost and 97 packages were installed against an original target of 151. In this instance, due to a direct mail campaign to 10,000 Economy 7 users, there were higher than predicted carbon savings achieved by this scheme.

Measures Summary	
Loft Insulation	61
Cavity Wall Insulation	28
Replacement Heating Systems	97
Low Energy Lighting	338
Hot Water Cylinder Jackets	4
Other Measures	0

NIEE 10 04 I P NIE Energy Free Insulation

Provided 100% funding for cavity wall and loft insulation. Referrals were generated through a number of scheme partners and through billing inserts. 28,071 measures were installed and energy savings generated were higher than anticipated, due to the ratio between loft and cavity insulation being different from that proposed.

Measures Summary	
Loft Insulation	5,625
Cavity Wall Insulation	2,449
Replacement Heating Systems	0
Low Energy Lighting	16,848
Hot Water Cylinder Jackets	2,073
Other Measures	1,076

NIEE 10 05 I P NIE Energy Cosy Homes Insulation

This is an insulation-only scheme and provided 950 grants for housing association properties. Although cavity wall insulation had been allowed for, there was little uptake as the majority of properties had either solid walls or existing wall insulation.

Measures Summary	
Loft Insulation	899
Cavity Wall Insulation	51
Replacement Heating Systems	0
Low Energy Lighting	1810
Hot Water Cylinder Jackets	0
Other Measures	0

PSL 10 01 M P Phoenix Snug Plus

This scheme provided funding for the Installation of 220 replacement heating systems and associated insulation and energy efficiency measures where appropriate.

Measures Summary	
Loft Insulation	135
Cavity Wall Insulation	38
Replacement Heating Systems	220
Low Energy Lighting	880
Hot Water Cylinder Jackets	0
Other Measures	0

NON-PRIORITY SCHEMES

ENA 10 01 O NP Energia Variable Speed Drives

This scheme targeted industrial/commercial premises with variable speed drives. Only two companies were assisted which was well below the anticipated levels and is attributed to the poor economic situation in the commercial sector. Therefore the spend was severely reduced.

ENA 10 02 L NP Energia High Bay Lighting Enhancement

This was a replacement lighting system to replace metal halide high bay lighting with high frequency compact fluorescent T5 lighting. It offered a free survey, free design and technical specification. Due to a downturn in capital expenditure in the business sector, uptake of the scheme was less than predicted and therefore not all of the funding was spent. Outrun carbon savings were 39% lower than anticipated with 16 companies benefitting from 1,365 new light fittings.

ENA 10 03 L NP Energia Fluorescent Lighting Enhancement

This scheme provided replacement fluorescent lighting. 14 installations were completed in 10 companies with 1,106 fittings installed. Overall carbon savings from the programme were 26% less than anticipated, due to lower take up than predicted.

ENA 10 04 O NP Energia Hysave Liquid Pump Amplification for Refrigeration

The Hysave project aimed at giving refrigeration systems a capacity boost while saving electricity through liquid refrigerant pumping technology. The scheme was marketed throughout Northern Ireland and one company successfully met the criteria. Expected spend and carbon savings were considerably less than forecast when a second successful company did not proceed with a large installation as hoped.

ENA 10 05 O NP Energia Variable Speed Compressors

This was developed to promote the uptake of efficient Variable Speed Compressors in industrial/commercial premises. In all, 9 installations were carried out against a backdrop of the poor economic climate which hampered 'sales' and resulted in 42.5% less grant spend, and 42.6% lower carbon savings.

ENA 10 06 O NP Energia Sonic Leak Detection

This scheme provided ½ day surveys at premises for leak detection. 38 companies availed of the scheme and 65 surveys were carried out. In total, spend was 70% less than expected however energy savings were only 11% less than predicted due to significant energy savings being identified during the surveys. The costs of the survey could only be claimed back once energy efficiency work which had been identified in the survey was actually carried out.

ESB 10 01 L NP ESB IE Energy Efficient Lighting Scheme

This is a lamp replacement scheme in the commercial sector to replace existing lighting with compact fluorescent lamps. Two companies availed of the funding which was well below expectations, with a result that the GWh achieved was 4.24 against the predicted 35.7. In total 233 luminaries were installed.

FIR 10 01 NP C Firmus SME Offer

This scheme provided funding towards high efficiency gas condensing boilers with system controls in the SME sector. 50 boiler installations took place along with some upgraded system controls such as time-clocks and room thermostats. Again, fuel mix of boilers replaced played a part in a 24.9% drop in expected energy savings.

NIEE 10 06 I NP NIE Energy Insulation Cash-back

This has been a scheme that has run successfully for the last number of years, providing cash-backs for cavity wall and loft insulation in domestic properties. This year, however, due to a similar scheme becoming available via Land and Property Services and a lower cash-back amount, the scheme was not as successful as had been hoped with 446 cash-backs being made against an original prediction of 2936 loft and cavity wall installations.

NIEE 10 08 O NP NIE Energy Variable Speed Drives

This scheme provided commercial electricity customers with assistance towards a range of variable speed drives and motors for ventilation, air compressors and controls upgrades. 32 measures were installed which was lower than expected and energy savings were lower than predicted.

NIEE 10 09 L NP NIE Energy SME Lighting

This scheme was withdrawn due to the scheme partner being able to fulfil their role.

NIEE 10 11 L NPI NIE Energy Commercial LED Lighting

This scheme fell within the innovative category and was to promote the uptake of LED lighting in the commercial sector. A grant of approximately 20% was available towards the cost of LED lighting. Uptake was slower than expected due to the high cost of LED lighting. In total five organisations availed of the lighting upgrades.

NIEE 10 12 I NPI NIE Energy Solid Wall Insulation

This scheme was withdrawn due to no uptake

Appendix 2

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 2010-11 NISEP has been loaded into the database. Table A1 below shows the percentage of 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 around equal height as both indicate the data as a % of the national total. So for example; on the graph Ards Borough council has 4.45% of the NI households and received 4.47% of the NISEP measures.

It should be stressed that the graphs below are based on a sample of 31% of 2010-11 NISEP household measures data, so with complete data, the peaks and troughs may even out. That said, the data we do have does provide an interesting snapshot of activity across Northern Ireland and may prove useful in trying to even out the spread of measures across councils in future NISEP rounds.

Table A1 – Geographical spread of measures and % of households

(Percentage of overall NISEP interventions per council area in red and percentage of NI households in each council area is shown in blue)

