Northern Ireland Sustainable Energy Programme

Annual Report 2018-19

Prepared by the Energy Saving Trust

1. Executive Summary

This annual report reviews the performance of the 2018-19 Northern Ireland Sustainable Energy Programme (NISEP) schemes, outlining the measures installed, financial benefits to recipients and the energy (GWh) and carbon savings associated.

For 2018-19 the initial NISEP fund was £7,941,946 (as set out in the NISEP Framework Document) collected as an average of £9.04 per electricity customer across approximately 879,016 domestic and business customers. The total NISEP spend on schemes at year end was £8,034,183, which is higher than the initial amount available, due to the reallocation of underspend from the previous year. However, at year end, there was also approximately £400,000 of NISEP funding remaining unspent. This was returned to the pot for reallocation in 19/20. A lower than expected uptake in the Non-Priority Category, mainly under commercial schemes, has resulted in 91% of NISEP funding being spent in the Priority Category. This is a significant increase to the 80% ringfence for Priority Schemes at the start of the year. Reasons for the above will be discussed in greater detail within this report.

In total, twenty-four schemes were approved, however, one scheme did not go ahead, and two schemes closed during the year due to no uptake. The funds from these schemes were redistributed to other, more successful schemes to try to maximise in-year spend and associated energy savings. There was also one commercial scheme that was merged with another commercial scheme, due to the similarity of the measure being offered.

Table 1 – Comparative Summary of Outturn Savings

	2018-19	2017-18
Total lifetime energy savings (GWh)	482.814	602.122
Total lifetime carbon saved (tC)	64,708	107,459
Gross lifetime customer benefits (£)	43,814,973	78,507,635
Total incentives earned (£)	13,666	79,285

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 schemes.

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.

The majority of the funding (80%) is ring-fenced for spend for vulnerable customers in Northern Ireland. Previous consultations have substantiated the view that this level of funding for vulnerable customers should remain.

In 2018-19 the NISEP continued to focus on vulnerable customers (known internally as the Priority Sector) who are domestic customers on lower incomes who may be vulnerable to fuel poverty. £6,235,177 was made available at the start of the year for this sector. The remaining £1,558,794 was split between non-priority domestic and commercial schemes and the non-priority innovative schemes category. Any additional underspend from 2017-18 was made available for all Primary Bidders across all categories to utilise.

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
- Energy monitors
- Shower flow regulators

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

In the Non-Priority domestic and commercial category, measures included;

- Insulation 'cash-back' offers for cavity wall, and loft insulation in the domestic sector
- Variable speed drives and variable speed compressors
- Energy efficient and LED lighting systems
- Heating controls
- Energy Screw Air

3. Types of schemes in 2018-19

In 2018-19, twenty-four schemes were approved, however, one scheme did not go ahead, and two schemes had no uptake of measures and closed during the year. There was also one commercial scheme that was merged with another commercial scheme, due to the similarity of the measures being offered. Scheme performance, such as no uptake, is taken into consideration when assessing future bids for NISEP funding. The following tables summarise the number of schemes per Primary Bidder and schemes per category.

Table 3.1 - Summary of approved schemes by Primary Bidder

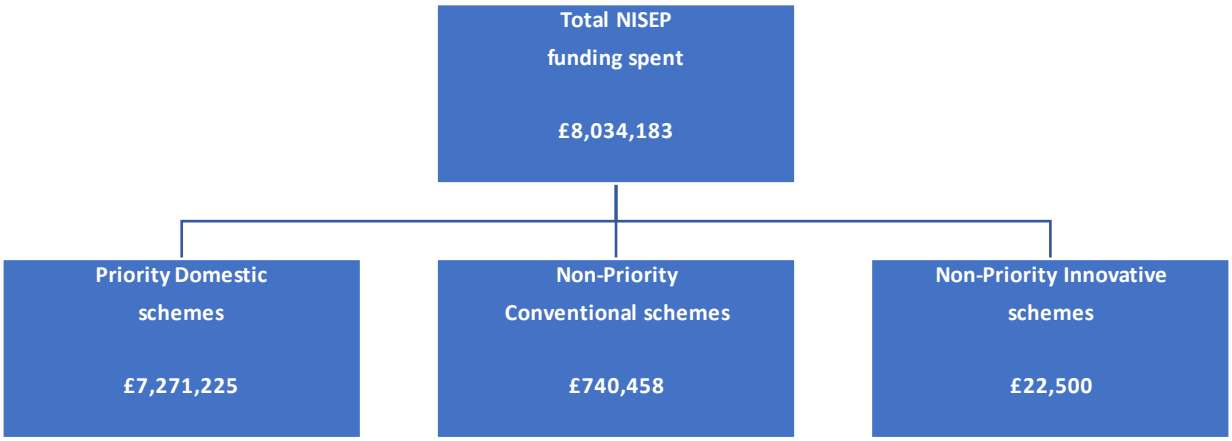
Electric Ireland	1
Energia	7
Energystore	2
firmus energy	1
Fusion	4
Power NI	5
SGN Natural Gas	2
Warmfill	1
Workspace	1

Table 3.2 – Breakdown of schemes by category

Priority schemes	13
Non-Priority conventional	10
Non-Priority innovative	1

Table 3.3 below shows how the NISEP funds spent were split between each funding category in 2018-19.

Table 3.3 - NISEP Breakdown of Funding Spent



4. Priority Domestic Schemes

Of the **£8,034,183** spent, **£7,271,225** was utilised on Priority Domestic schemes (those targeted at vulnerable/lower income), representing 91% of the total funding spent. This is significantly higher than the 80% ring-fenced for priority schemes at the start of the year and is mainly due to underspend from the previous year being utilised where demand was greatest.

In total, Priority funding contributed to **24,589** energy efficiency interventions being installed. This is 5,082 more measures than in the previous year; one reason being that previous years' underspend was available for Priority measures, and the second reason is that there was a total of circa £850k difference in NISEP funding spent on Priority schemes between the two NISEP years. Despite this high level of spend, at year end, there was an underspend of approx. £130k within the Priority category, a large proportion of which was related to underspend from two Housing Association schemes.

In comparing the two NISEP years in terms of fuel switch, oil to gas remains the highest proportion of fuel switch funded, at 46% of the heating system installs. There was an increase in Electric (E7) to Gas conversions, up from 18% to 34% and this is mainly attributed to the heating systems installed under the Housing Association (HA) schemes. In the previous year, HA properties under one scheme had availed of all oil to gas conversions, however in 18/19 a much higher proportion availed of Electric to Gas conversions. Changes to electricity generation in Northern Ireland have contributed to greener electricity and therefore less carbon savings will be delivered for Electric to Gas or Electric to Oil fuel switches in future NISEP years.

For that reason, from 20/21, electric conversions will be monitored on a case by case basis. There has also been a reduction in solid fuel conversions, down from 8% to 4% in 18/19.

Four of the twelve Priority schemes provided a fully funded 'whole house solution' package. Another four of the Priority schemes provided different levels of a partial grant towards similar measures. Of the remaining four schemes, three provided fully funded individual measures offering cavity wall and loft insulation and one provided a partial grant for individual measures to housing associations. Table 4.1 shows a breakdown of priority measures and Table 4.2 shows the breakdown of heating system installations.

We continue to encourage the uptake of properties availing of a full package of 'whole house solution' measures and have issued guidance and further requirements to encourage uptake. Primary Bidders continue to be reminded that 'whole house solution' schemes should be designed to ensure maximum uptake of measures offered per household, i.e. unless there are exceptional circumstances, when a heating system is being installed, all insulation measures should be offered, and if required, should be installed. Customers should always be made aware of the benefits of insulation measures. Primary Bidders are required to monitor levels closely going forward and report to the Programme Administrator on levels of uptake for insulation within a 'whole house solution' scheme.

The Framework Document has been amended further to state that Primary Bidders must ensure that suitably qualified surveyors are sent to properties to check insulation requirements and the surveyor must carry out the necessary checks to ensure that there is adequate insulation (both CWI and Loft) in the property. The importance of the 'whole house solution' approach continues to be re-emphasised to all Primary Bidders and we would expect to see higher numbers availing of the maximum number of measures required, in future NISEP years, as a result of the above.

Energy savings of **257.071 GWh** in the Priority Category represents approximately 53% of the overall energy savings. This is more than in 17/18 and can be attributed to an increase in NISEP spend in this category (circa £850k), and in particular, more heating system, insulation and LED installs. There has been an increase in the total number of heating system installs by approximately 280 measures. The change in fuel mix, with an increase in the number of Full Electric Central Heating to Gas conversions in 18/19 has also contributed to the increase in energy savings. However, it is important to note that we do not expect to see this trend continue, as electricity becomes greener. Therefore, this type of conversion in future NISEP years will have more of a negative impact to energy/carbon savings. Insulation measure installs have increased by approximately 350 measures, and most notably there has been an increase in the proportion of loft Insulation measures in the Priority Category. There continues to be a high proportion of partial fill cavity wall insulation as opposed to full

fill, therefore there will be an uplift in energy savings, as more measures are completed, however it won't be as significant an uplift as partial fill savings are less than full fill. There has also been an increase in LEDs installed as opposed to CFLs, which increases energy savings overall. There continues to be a high requirement for ventilation, which will have an impact on average measure cost.

Measures installed equate to a lifetime gross customer benefit (GCB) of **£13,680,345** for the most vulnerable households in Northern Ireland. Although overall more measures have been installed in this category, the reduction in GCB to the previous NISEP year, is largely attributed to fuel mix and a reduction in properties with 'No Central Heating' (reliant on electric room heaters) and a reduction in properties converting from solid fuel. These types of conversions yield a significantly high GCB when compared to other types of conversions such as oil to gas. The conversion numbers of oil to gas have also increased in 18/19.

Table 4.1 – Summary of Priority Measures Installed 18/19

Loft insulation (LI)	2,648
Cavity wall insulation (CWI)	2,589
CFLs	892
LEDs	15,517
Hot water cylinder jackets	293
Energy monitors	137
Heating replacements	1,369
Shower flow regulators	330
Heating Controls	22
TOTAL	**24,589**

Table 4.2 – Summary of Heating Replacements 18/19

Electric to gas	468
Electric to oil	7
Oil to gas	633
Oil to oil	69
No heat (electric) to gas	16
Solid fuel to gas	58
Solid fuel to oil	13
Gas to gas (replacement)	105
TOTAL	**1,369**

Below is a snapshot of a sample of customer feedback from Priority scheme recipients, provided by the Primary Bidder. (For a full list and detailed descriptions of the NISEP schemes, see Appendix 1).

Energy Plus customer, "We wish to acknowledge the friendly but efficient way our Oil Heating was arranged. We were very pleased with the installation".

Warm At Home Plus customer, "extremely happy with the grant received as now getting instant heating & hot water in a matter of minutes".

Home Comfort Plus customer, "Workmanship first class, very neat, friendly and very efficient men".

Keep Warm customer, "Fantastic, quick service, I could feel the difference in the house instantly".

Thermal Comfort customer, "My fuel bills are a lot lower. The house is much warmer and holds the heat much better. The install team were great and very friendly".

5. Non-Priority schemes (commercial, domestic and innovative)

Of the **£8,034,183** spent, **£762,958** was utilised on Non-Priority schemes, representing 9% of the total funding spent. Non-Priority schemes provide part-funding, usually in the region of 20%, towards the cost of energy efficiency measures. These schemes tend to be more cost effective than those in the priority sector due to commercial energy efficiency measures yielding good energy savings in comparison to the spend. An underspend of approx. £200k is lower to the previous year but remains significant. The majority of this, approx. £170k is from underspend in the commercial schemes. The feedback that we continue to receive each year, is that projects within the commercial category take a longer period to plan and complete, and the current NISEP financial year timeframe, continues to provide challenges for the commercial sector. As a result, applications do not progress as swiftly as domestic applications, which then leads to low uptake in this category and underspend at year end.

Overall, there has been a significant reduction in the proportion of NISEP funding spent in the Non-Priority Category, down from 17% in 2017/18 to 9% in 2018/19.

The number of measures in the Non Priority Category has reduced by over 11,000 measures this year, compared to 17/18, and this is mainly related to the reduction of LED installs. LEDs have reduced from 38,558 in 17/18 to 28,050 in 18/19. Although, LEDs continue to be widely adopted by businesses each year, the timeframe for projects to complete is challenging for many businesses and as a result many applications sometimes do not come to fruition. Energy savings will be impacted overall.

Reviewing other trends in the commercial sector, the uptake of VSDs remains the same with 27 installed in 18/19 as in the previous year. However, there has been a reduction in the uptake of Variable Speed Compressors Drives (VSDs), from 25 to only 6 in 18/19.

The number of Non-Priority domestic insulation measures installed has decreased significantly by 664 CWI/LI measures, resulting in a reduction in NISEP funding spent on insulation schemes targeting non-priority customers. There has been a decrease by approximately £160k in spend on domestic insulation measures, compared to the previous year.

There was one innovative non-priority scheme approved in 18/19, similar to the previous year. We will continue to encourage innovative schemes to be submitted which would help bring forward emerging but proven domestic or commercial technologies that provide a better energy efficiency performance than 'standard' measures.

Energy savings of **225.742 GWh** in the non-priority sector represents about 47% of the overall energy savings. This is a change to previous years where we had been seeing a higher proportion of energy savings in the Non-Priority Category. This can be explained by the increased spend and therefore more measures installed attributing to high energy savings in the Priority Category overall. In the Non-priority Category, there were notably fewer insulation measures, VSCs and LEDs installed to previous years, which will have impacted overall energy savings and will explain a lower lifetime gross customer benefit of **£30,134,628** to the previous NISEP year**.** However, this figure overall still illustrates the significant gross customer benefit that can be achieved largely from the commercial sector grants offered under NISEP. LED lighting continues to become more cost effective, with the associated high energy savings and gross customer benefit.

In total, Non-Priority funding contributed to **28,768** energy efficiency interventions.

Table 5.1 – Summary of Non-Priority Measures Installed 18/19

Loft insulation	159
Cavity wall insulation	520
Variable speed drives	27
Variable speed compressors	6
Energy efficient lighting	28,050
Heating controls	5
Energy Screw Air Blowers	1
TOTAL	**28,768**

Below is a snapshot of a sample of customer feedback from Non Priority scheme recipients, provided by the Primary Bidder. (For a full list and detailed descriptions of the NISEP schemes, see Appendix 1).

Commercial LED Lighting Customer, "'No hesitation in recommending LED Lighting!".

Robox Energy Screw Compressor Customer, "We are very happy with design, installation, payments & process and happy with the savings. We would consider other technology and we would like to install another Robox blower".

6. Utilisation of NISEP Funding 2018-19

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 provide 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 lower the pence per kilowatt figure, the more cost-effective the scheme).

Table 6.1 - Scheme Summary

SCHEME REF	SCHEME TITLE	NISEP Funding Spent £	Accredited Lifetime Energy Savings GWh	Lifetime Carbon Saved Tonnes	Gross Customer Lifetime Benefit £
EI 18 01 LNP**	Energy Efficient Lighting Scheme	0	0	0	0
ENA 18 01 LNP***	LED/High Bay Lighting (Over 12 hours)	0	0	0	0
ENA 18 02 LNP	LED Lighting	403,915	133.970	18582	20,108,943
ENA 18 03 ONP	Variable Speed Drives	6,741	1.707	196	256,209
ENA 18 04 ONP	Variable Speed Compressors	33,180	16.734	2184	2,511,770
ENA 18 09 ONP	Intelligent Heating Controls	7,512	2.622	341	175,179
ENA 18 10 ONP**	Climateq Air Conditioning Attendant	0	0	0	0
ENA 18 11 ONP	Robox Energy Screw Compressor	22,500	3.137	396	470,891
ESL 18 01 IP	Thermal Comfort	2,027,700	101.130	13061	5,848,066
ESL 18 02 INP	£250 Cashback Scheme	194,160	38.454	4967	2,241,044
FIR 18 02 MP	Home Comfort Plus Scheme	541,840	10.983	2139	388,279
FUS 18 01 MP	Energy Plus	1,403,493	19.724	3032	1,005,399
FUS 18 02 MP	East Down Natural Gas Energy Saver	49,140	0.823	136	22,858
FUS 18 03 MP	Energy Saving Home Assist	175,811	3.621	605	134,815
FUS 18 04 MP	Housing Association Energy Saver	399,560	22.316	2704	1,054,129

PNI 18 01 MP*	Energy Saver Homes	0	0	0	0
PNI 18 02 MP	Cosy Homes	357,996	16.389	2263	558,462
PNI 18 04 I P	Cosy Homes Insulation	15,860	0.893	102	50,298
PNI 18 06 L NP	LED Lighting	23,249	5.618	665	843,315
PNI 18 07 O NP	Variable Speed Drives	71,701	23.500	2912	3,527,276
SGN 18 01 M P	Warm at Home Plus	190,838	4.191	772	124,198
SGN 18 02 M P	Warm at Home Cashback	3,560	0.080	16	1,269
WFL 18 02 I P	Warmer Homes for Golden Age	1,046,576	29.692	3808	1,750,882
Work 18 01 I P	Keep Warm Scheme	1,058,851	47.230	5829	2,741,688
	TOTALS**	**8,034,183**	**482.814**	**64,708**	**43,814,973**

* *scheme did not go ahead; funds were returned to the NISEP pot for reallocation*
** *funds were transferred to another scheme due to no uptake*
*** *scheme was merged with ENA 18 02 LNP due to the same measure offering*
**** *where relevant, total figures have been rounded to the nearest £*

Three schemes were allocated funding at the start of the NISEP year, one of which did not go ahead, Energy Saver Homes PNI 18 01 MP, with the remaining two schemes, Energy Efficient Lighting Scheme, EI 18 01 LNP, and Climateq Air Conditioning Attendant, ENA 18 10 ONP, closing during the year due to no uptake. One scheme, LED/High Bay Lighting (Over 12 hours), ENA 18 01 LNP was merged with Energia's other LED scheme, due to the similarity in the measure offering.

Figure 6.2 - Lifetime energy savings by category (GWh)

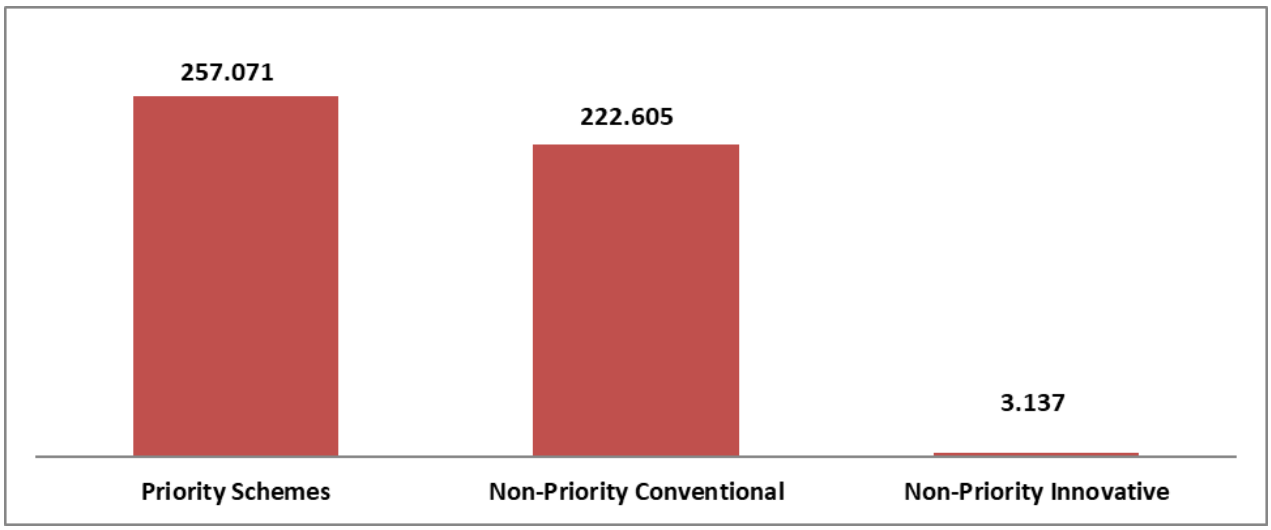


Figure 6.3 - Priority Scheme Cost Effectiveness (cost in pence per kWh of energy saved, p/kWh) (*the lower the value, the more cost effective the scheme)*

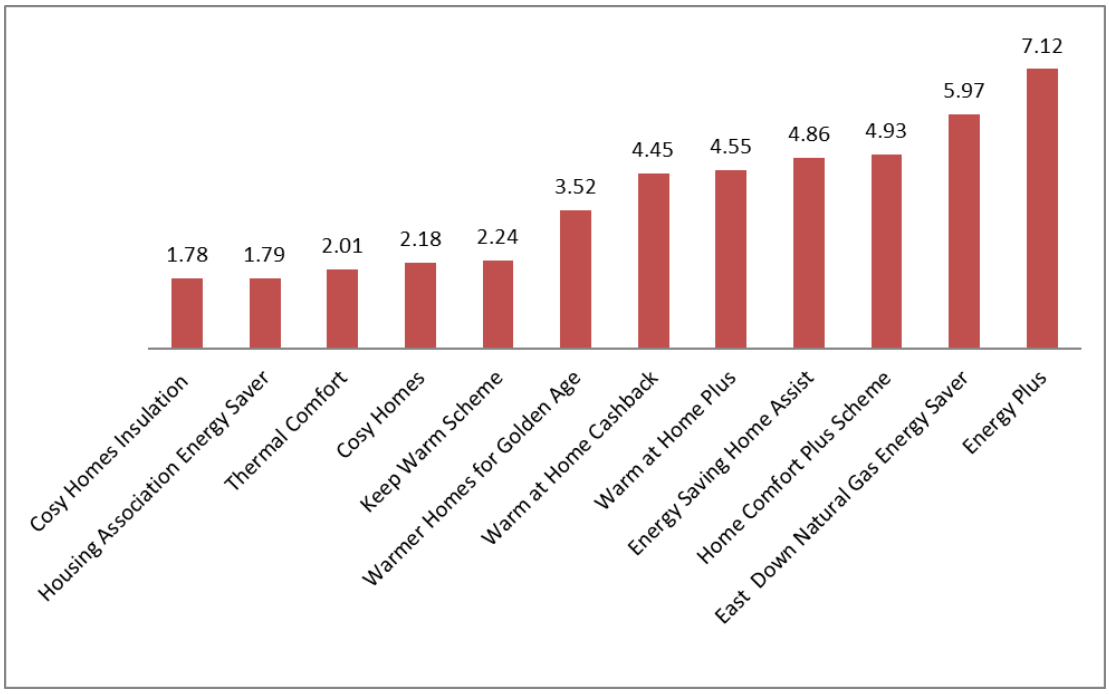
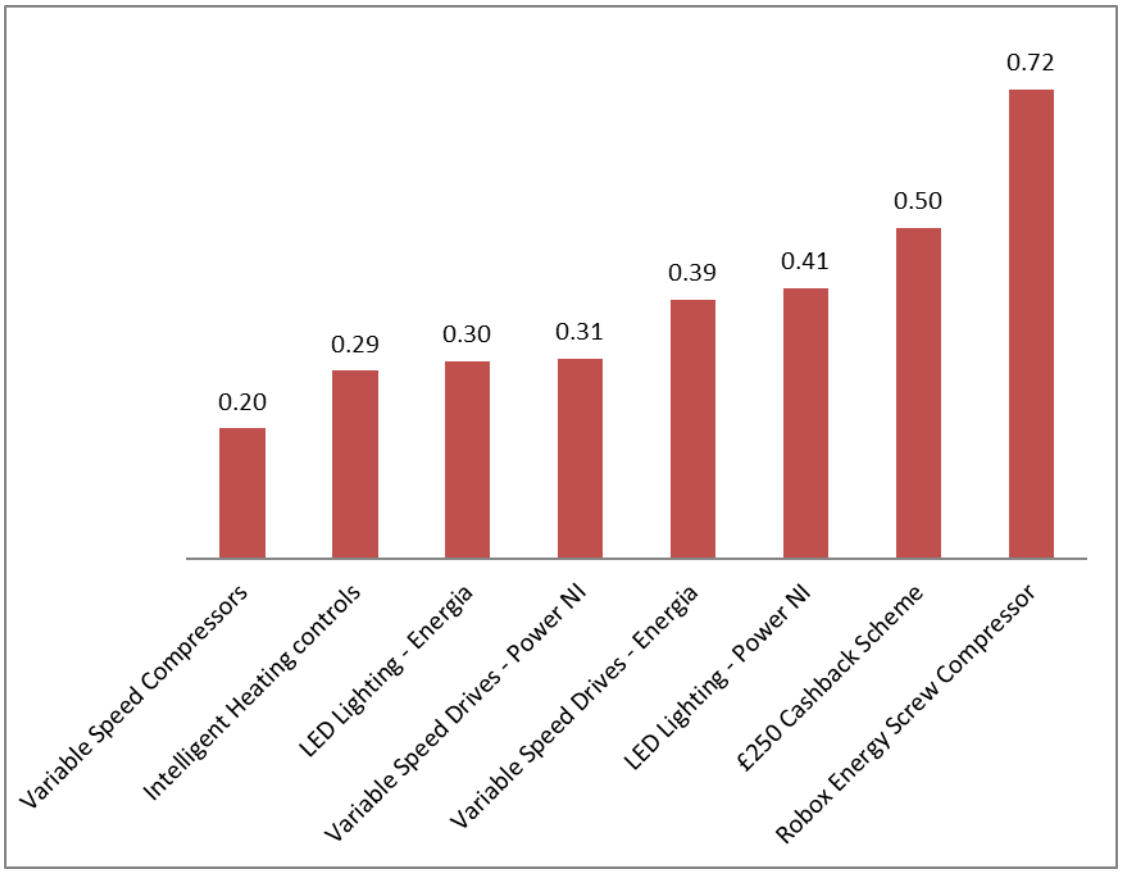


Figure 6.4 - Non-Priority Scheme Cost Effectiveness (p/kWh) (*the lower the value, the more cost effective the scheme*)



7. Target Achievement and Incentive Payments

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

As a result of exceeding the GWh targets, incentive payments were awarded to each of the Primary Bidders. The total incentive payments were **£13,666**, as summarised in table 7.1 below.

7.1 - Summary of Incentive Payments 2018-19

Primary Bidder	Amount NISEP spent (£)	Savings achieved (GWh)	Incentive earned (£)
Energia	473,848	158.170	3,509
firmus energy	541,840	10.983	717
Fusion	2,028,004	46.484	8,309
Power NI	468,806	46.400	233
SGN Natural Gas	194,398	4.271	898
		TOTAL	**13,666**

8. Geographical Spread of Measures

Bar Chart 8.1 below shows the percentage of NISEP interventions per council area in red, and the percentage of NI households within each council area in blue. For NISEP to demonstrate good geographical spread across all council areas, the blue and the red columns should be of similar height. Both columns illustrate the data as a percentage of the national total.

Overall, there continues to be a reasonable spread of measures across many of the council areas. In terms of similar trends, Belfast council area continues to have the highest proportion of measures installed, increasing by 7% from 17/18. Fermanagh and Omagh council area has remained the same in terms of % proportion of measures. The main changes are in the Derry City and Strabane council area, where the proportion of measures have increased by 7%. Other council areas which have seen an increase in proportion of measures are Causeway Coast and Glens (up by 2%) and Mid Ulster (up by 1%). We have seen a small reduction in the proportion of measures in the remaining council areas, when comparing to 17/18.

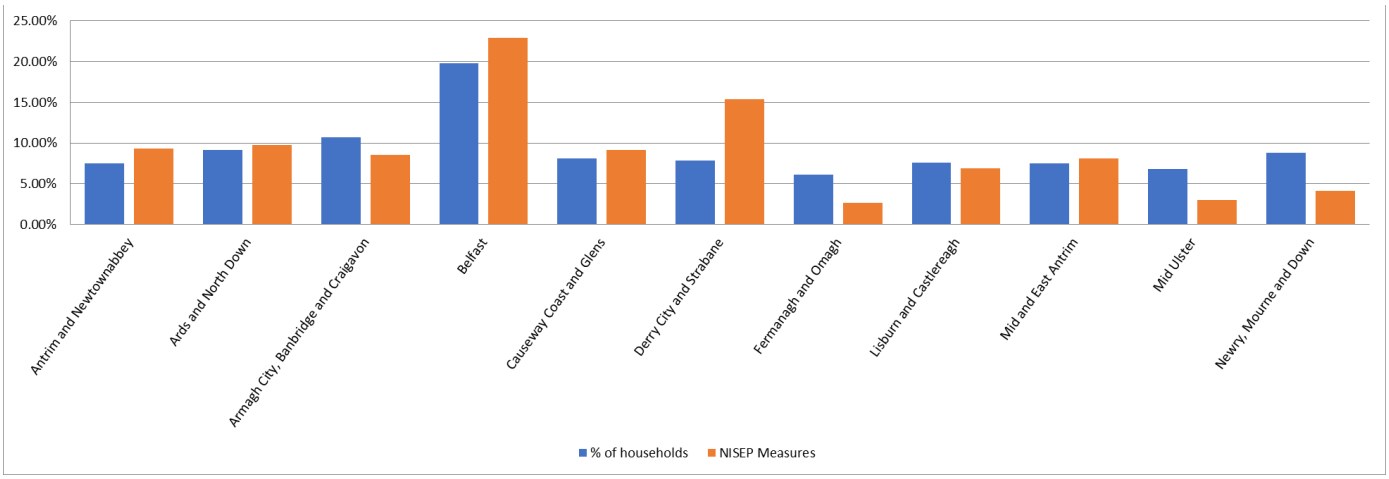
In terms of council areas showing as a higher than average proportion of measures when compared to population size, and indicating a reasonable spread of measures, this still remains the case with Antrim and Newtownabbey, Ards and North Down, Derry City and Strabane and Mid and East Antrim, council areas. It is also important to highlight that there has been a significant increase in the average proportion of

measures, when compared to population size, in the Derry City and Strabane council area (up by approx. 90% from 17/18). Where we continue to see a lower than average proportion of measures to population size, is in the Fermanagh and Omagh, Mid-Ulster and Newry and Mourne, council areas. In terms of significant changes to 17/18 for Armagh City, Banbridge and Craigavon, and Lisburn and Castlereagh council areas, you will see that the red column is now lower in height to the blue column, in contrast to 17/18. This will be related to the reduction in the proportion of measures in these council areas. Although Mid and East Antrim has dropped significantly, the red column remains slightly above the blue column, which still indicates a reasonable spread of measures in term of population size. Belfast council area has seen an increase in the proportion of measures and as a result, you will see that the red column is higher to the blue column, again in contrast to 17/18. The same is apparent for Causeway Coast and Glens council area.

In 18/19, in contrast to the previous year, Belfast council area received the highest proportion of NISEP heating installs and had the highest increase in % heating installs, increasing from 15% to 32%. There was also a notable increase in % heating installs in Derry City and Strabane council area, increasing from 12% to 20%. Most notable reductions in proportion of heating installs, were in Armagh City, Banbridge and Craigavon, Newry, Mourne and Down, and Mid and East Antrim.

In reference to insulation, there were less significant variations in 18/19 to the proportion of measures across council areas, in comparison to 17/18 and heating. Belfast council area continues to have the highest proportion of NISEP insulation measures, increasing from 18% to 22%. Most notably there has been an increase in insulation installs in Derry City and Strabane council area, from 8% to 13%. In terms of a reduction however, this was mainly in Lisburn and Castlereagh council area.

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

	2018-19	2017-18
NISEP funding spent (£)	8,034,183	7,177,302
Total lifetime energy savings (GW)	482.814	602.122
Carbon savings (t)	64,708	107,459
Gross customer benefit (£)	43,814,973	78,507,635
Total incentives earned (£)	13,666	79,285

Overall, the total NISEP spend on schemes at the end of the year was **£8,034,183**, which is higher than the initial pot of funding, and is due to the reallocation of underspend from previous years. As evidenced in the table above, as 17/18 had a significant underspend, there is a difference of approx. £850k in NISEP funding spent between the two years. Although spend was higher in 18/19 overall, there was a significant reduction in spend in the Non Priority Category, and therefore fewer measures installed. Measures in this category, are known to yield the highest energy savings, carbon savings and gross customer benefit overall, i.e. LED lighting, and so this would have had a significant impact. It is also important to highlight that gross customer benefit was impacted by a change in fuel mix in the priority category, where there was an increase in oil to gas conversions and a reduction in 'No Heat' and 'Solid Fuel' conversions, when compared to the previous NISEP year.

10. Conclusions

In 2018/19, there were twenty-four schemes approved initially, one of which did not go ahead, and two of which did not receive uptake and closed during the NISEP year. The funds from these schemes were redistributed to other, more successful schemes to try to maximise in-year spend and associated energy savings. There was also one commercial scheme that was merged with another commercial scheme, due to the similarity of the measures being offered in both schemes. The overall NISEP spend was £8,034,183 which was over £850k more than in 17/18, mainly as a result of the high underspend allocated to 18/19.

The Programme Administrator periodically reviews spend and committed funds via the 5 and 8 month reporting process. This process facilitates the opportunity for funds to be reallocated between schemes, if deemed appropriate. Due to several varying factors, there was an underspend of approximately £400k at year end, less than in the previous year. This has been reallocated to 2019-20 schemes.

Priority funding contributed to 24,589 energy efficiency interventions. This amounts to an increase of 5,082 measures to the previous year. The main reason for this was the

circa £850k difference in NISEP funding spent on Priority Schemes between the two NISEP years. Another reason was that in 18/19 the NISEP funding available initially for priority measures was more, due to the previous year's underspend being utilised where demand was greatest. This also resulted in the Priority Category representing 91% of the total funding spent. At year end, there was an approximate underspend of £130k within the Priority category, a large proportion of which was related to underspend within two Housing Association Schemes.

As a result of a higher spend and more heating, insulation and LED measure installs, this resulted in the Priority Category representing approximately 53% of the overall energy savings. This is a higher proportion than in 17/18. The change in fuel mix, with an increase in the number of Full Electric Central Heating to Gas conversions in 18/19 has also contributed to the increase in energy savings. However, it is important to note that we do not expect to see this trend continue, as electricity becomes greener. Therefore, this type of conversion in future NISEP years will have more of a negative impact to energy savings. There continues to be a high proportion of partial fill cavity wall insulation as opposed to full fill, therefore there will be an uplift in energy savings, as more measures are completed, however it won't be as significant an uplift. As expected, measure costs continue to increase, particularly for insulation, with an increase in the requirements for ventilation. There has also been an increase in LEDs installed as opposed to CFLs, which increases energy savings overall.

Although overall more measures have been installed in this Priority Category, the reduction in GCB to the previous NISEP year, is largely attributed to fuel mix and a reduction in properties with 'No Central Heating' (reliant on electric room heaters)' and a reduction in properties converting from 'Solid Fuel'. These types of conversions yield a significantly high GCB when compared to other types of conversions such as oil to gas due to the higher prices that customers pay for energy when using electric room heaters for example. The number of homes converting from oil to gas have increased in 18/19, which will help to explain the lower GCB in comparison to NISEP funding amount for six of the 18/19 Whole House Solution Schemes. Furthermore, oil prices were exceptionally low when these fuel switch figures were calculated ahead of the publication of the Framework Document. There was also a low number of insulation installs within the same properties that converted from oil to gas. As the price of oil has increased since, and as Primary Bidders continue to be reminded that 'whole house solution' schemes should be designed to ensure maximum uptake of measures offered (heating and insulation) ,we should see less of this scenario in future years.

EST have since updated the Framework Document and issued guidance and further requirements, to encourage customers to avail of the 'whole house solution' (WHS). Customers should always be made aware of the benefits of insulation measures. EST will also be requesting from 20/21 going forward, that Primary Bidders report on the levels of WHS packages installed, through the interim reports, and that monthly WHS claims are encouraged where possible, and are closely monitored.

The importance of the 'whole house solution' approach continues to be re-emphasised to all Primary Bidders. It can achieve much greater efficiency, addressing many elements of a home's energy use at once. To maximise thermal comfort and customer satisfaction, to offer best value for money, to ensure maximum energy savings and to reduce bills for the householder, EST will continue to highlight the importance of the whole house solution approach to all Primary Bidders. We would expect to see higher numbers availing of the maximum number of measures required, in future NISEP years, as a result of the steps discussed throughout this report.

The Non Priority Category had a significantly lower spend and gross customer benefit to the previous year. There were approximately 11,000 less measures (mainly LEDs) installed in 18/19 and only 9% of the total NISEP funding spent in this category (down from 17% in 2017/18). There was also an underspend of approx. £200k, which is lower to the previous year but remains significant. Most of this underspend is from within the commercial schemes. Although LEDs continue to be widely adopted by businesses each year, the timeframe for commercial projects to complete is challenging for many businesses (longer to domestic offerings) and as a result many applications do not come to fruition. Energy savings, as a result, have been impacted overall, and a different trend is evident in 18/19, where the Priority Category had the higher proportion of energy savings compared to the Non Priority.

In relation to domestic measures with the Non Priority Category, there has been a decrease by approximately £160k in spend on insulation measures, compared to the previous year. This will also impact energy savings and gross customer benefit.

Again, there were low numbers of innovative schemes submitted in 18/19 and only one scheme was approved, similar to the previous year. We will continue to encourage innovative schemes to be submitted, which would help bring forward emerging but proven domestic or commercial technologies that provide a better energy efficiency performance than 'standard' measures.

Overall there were 53,357 measures installed, which equates to 6,262 fewer measures when in comparison to the previous year. There was an increase in measures in the Priority Category, mainly as a result of an increase in available funding, compared to the previous year.

Overall, there continues to be a reasonable spread of measures across many of the council areas. In 18/19, in contrast to the previous year, Belfast council area received the highest proportion of NISEP heating installs and had the highest increase in % heating installs. There was also a notable increase in % heating installs in Derry City and Strabane council area. Most notable reductions in proportion of heating installs, were in Armagh City, Banbridge and Craigavon, Newry, Mourne and Down, and Mid and East Antrim. In reference to insulation, there were less significant variations in

18/19 to the proportion of measures across council areas, in comparison to 17/18 and heating. Belfast council area continues to have the highest proportion of NISEP insulation measures. Most notably there has been an increase in insulation installs in Derry City and Strabane council area. In terms of a reduction however, this was mainly in Lisburn and Castlereagh council area.

In terms of council areas showing as a higher than average proportion of measures when compared to population size, and indicating a reasonable spread of measures, this still remains the case with Antrim and Newtownabbey, Ards and North Down, Derry City and Strabane and Mid and East Antrim, council areas. Where we continue to see a lower than average proportion of measures to population size, is in the Fermanagh and Omagh, Mid-Ulster and Newry and Mourne, council areas.

In terms of significant changes to 17/18 for Armagh City, Banbridge and Craigavon, and Lisburn and Castlereagh, council areas, there is a much lower proportion of measures to population size. Although, Mid and East Antrim has also dropped significantly, there remains a reasonable spread of measures in terms of population size. The Belfast council area, however, has seen an increase in the proportion of measures, and as a result, the average proportion of measures to population size has increased, again in contrast to 17/18. The same is apparent for Causeway Coast and Glens council area.

The gross customer benefit total translates as one pound of NISEP funding provided this year, providing £5.45 of Net Present Value lifetime benefits.

Appendix 1: Summary of participating NISEP schemes

PRIORITY SCHEMES

FUS 18 01 MP Energy Plus

This was a Priority Whole House Solution Scheme aimed at households which met set vulnerability criteria. The scheme provided a new energy efficient heating system plus loft and/or cavity wall insulation measures to households whose properties had no heating (i.e. no heating system in place or a heating system which upon survey, with documented evidence, was deemed to be beyond viable economic repair), Economy 7 heating or solid fuel heating. Eligible customers were offered a new gas energy efficient heating system if on the natural gas network, or an oil energy efficient heating system where gas was not available. A fully funded grant was available for a heating system upgrade/replacement, cavity wall insulation and/or loft insulation. Each heating system was also treated with the endotherm additive and each customer was offered up to 4 LEDs, a water widget and a climote (smart heating control).

In total 293 properties received measures through this scheme. Of these 293 properties, there were 4 properties that availed of a 'whole house solution' package and received: replacement/upgrade heating system, loft insulation and cavity wall insulation measures.

Measures Summary	
Loft insulation	64
Cavity wall insulation	5
Heating System (Upgrade/Replacement)	293
LEDs	829
Shower flow regulator	145
Smart Heating Control	18

FUS 18 02 MP East Down Natural Gas Energy Saver

This was a Priority Whole House Solution Scheme aimed at households which met set vulnerability criteria and were located within the area of the new East Down Natural Gas License Extension. The scheme provided a new energy efficient heating system, plus loft and/or cavity wall insulation measures to households whose properties had no heating (i.e. no heating system in place or a heating system which upon survey, with documented evidence, was deemed to be beyond viable economic repair), Economy 7 heating or solid fuel heating. Eligible customers were offered a fully funded new gas energy efficient heating system upgrade/replacement, cavity wall insulation and/or loft insulation. Each heating system was also treated with the endotherm

additive and each customer was offered up to 4 LEDs, a water widget and a climote (smart heating control).

In total 13 properties received a replacement heating system through this scheme. Of these 13 properties, there were no properties that availed of a 'whole house solution' package of both heating and insulation measures.

Measures Summary	
Heating System Replacement	13
LEDs	40
Shower flow regulator	10
Smart Heating Control	1

FUS 18 03 MP Energy Saving Homes Assist

This was a Part-Funded Priority Whole House Solution Scheme, aimed at households which met set vulnerability criteria. The scheme provided a new energy efficient heating system and loft insulation and / or cavity wall insulation measures to households which had electric or solid fuel central heating, no central heating or an old inefficient or broken oil, natural gas or LPG boiler. To qualify the existing had to be at least 15 years old or broken beyond viable economic repair. Eligible customers were offered a new gas energy efficient heating system if on the natural gas network, or an oil energy efficient heating system where gas was not available. Under the Energy Saving Home Assist Scheme, NISEP funded £1,500 towards the cost of a heating system upgrade/replacement, and £250 towards the cost of cavity wall insulation and/or loft insulation. Each heating system was also treated with the endotherm additive and each customer was offered up to 4 LEDs, a water widget and a climote (smart heating control).

Of these 112 properties, there were 2 properties that received: replacement/upgrade heating system and loft insulation. No properties received cavity wall insulation.

Measures Summary	
Loft insulation	2
Heating System (Upgrade/Replacement)	112
LEDs	257
Shower flow regulator	30
Smart Heating Control	2

FUS 18 04 MP Housing Association Energy Saver

This was a Priority Whole House Solution Scheme that installed energy efficient heating and insulation measures in Housing Association (HA) properties with Economy 7 or, upon survey with documented evidence, with an old and inefficient heating system (15 years or older). This scheme also improved the thermal quality of homes in the Housing Association stock by upgrading or installing insulation where necessary. A maximum grant of £1,000 was offered for heating and £150 towards both cavity wall and loft insulation. The HA met the remaining costs in excess of the grant value for each installation. Each heating system was also treated with the endotherm additive and each customer was offered up to 4 LEDs, a water widget and a climote (smart heating control). In total 373 properties received measures through this scheme.

Of these 373 properties, there were 3 properties that received: replacement heating system and loft insulation. No properties received cavity wall insulation.

Measures Summary	
Loft insulation	3
Heating System Replacement	373
LEDs	744
Shower flow regulator	145
Smart Heating Control	1

FIR 18 02 MP Home Comfort Plus

This was a Priority Whole House Solution scheme that targeted owner occupied householders that met set vulnerability criteria. To be eligible customers had to be within the firmus energy gas network area and have Economy 7, solid fuel, LPG (boilers over 15 years old), Oil (boilers over 15years old) or no heating, including oil boilers broken beyond viable economic repair. This was a fully funded scheme. The measures offered were a fully controlled natural gas heating system, loft/cavity wall insulation, an energy monitor and up to 4 LED lightbulbs.

In total 185 properties received measures through this scheme. Of these 185 properties, there were 86 properties that received: replacement heating system and loft insulation. No properties received cavity wall insulation.

Measures Summary	
Loft insulation	86
Heating System Replacement	185
LEDs	517
Energy monitors	137

PNI 18 02 MP Cosy Homes

The aim of this Priority scheme was to install energy efficient heating and insulation measures in housing association (HA) properties to raise the standard of heating systems and the thermal quality of homes in the HA stock. A grant of up to £1,000 was offered for heating and £100 towards insulation with housing associations paying the remainder. Each property received up to 2 CFLs, with each tenant also receiving in-home energy saving advice.

In total, nine housing associations signed up to the scheme and they were responsible for identifying suitable properties, in total 324. Of these 324 properties, there were 3 properties that received: replacement heating system and loft insulation. No properties received cavity wall insulation.

Measures Summary	
Loft insulation	3
Replacement heating	324
CFLs	648

PNI 18 04 IP Cosy Homes Insulation

This Priority scheme was developed to encourage Housing Associations to improve the insulation levels of their housing stock. A grant of £105 towards the cost of loft or cavity wall insulation was available. Each property received two CFLs, where required, and each tenant was given energy saving advice.

All the housing associations who registered for the scheme were responsible for identifying properties suitable for the grant and contributing the remaining costs of the measures.

In total there were 122 grants issued. There was no uptake of cavity wall insulation.

Measures Summary	
Loft insulation	122
CFLs	244

ESL 18 01 IP Thermal Comfort

This was a Priority Individual Measures scheme that offered fully funded Cavity Wall and Loft Insulation measures. It targeted the private tenants or owner-occupied households that met the scheme criteria.

A fully funded package of measures was available including cavity wall and/or loft insulation measures, a hot water cylinder jacket and up to 4 LEDs, if required.

Overall, 746 loft insulation and 1,707 cavity wall insulation measures were installed.

Measures Summary	
Loft insulation	746
Cavity wall insulation	1,707
LEDs	6,050
Hot Water Cylinder jackets	38

Work 18 01 I P Keep Warm Scheme

This was a priority Individual Measures scheme, where applicants were required to meet set eligibility criteria. The overall aim of the scheme was to provide loft or cavity insulation to those households which qualified for the scheme. Up to 4 LEDs and a hot water cylinder jacket were also offered to every customer. The scheme was aimed at priority customers; no customer contribution was sought from customers.

Overall, 1,051 loft insulation and 243 cavity wall insulation measures were installed.

Measures Summary	
Loft insulation	1,051
Cavity wall insulation	243
Hot Water Cylinder jackets	140
LEDs	4,613

NON-PRIORITY SCHEMES

ENA 18 01 LNP LED High Bay Lighting (Industrial)

Merged with ENA 18 02 LNP at start of NISEP year, due to similar measure offering.

ENA 18 02 LNP LED Lighting

This was a Non-Priority commercial lighting scheme that offered a grant of up to twenty per cent, replacing T12/T8 Fluorescent / High bay Light Fittings with LEDs c/w an integrated daylight/occupancy sensor in Industrial/Commercial Business Premises. Measures offered included LED light fittings; panels, high bays, bulkheads, spotlights, battens, floodlights etc. The Types of businesses targeted included offices, retail, hospitality, shopping centres, warehouses, factories, depots, sports halls and car parks.

In total 25,480 measures were installed.

Measures Summary

LEDs	25,480

ENA 18 03 ONP Variable Speed Drives

This was a Non-Priority commercial scheme and offered a thirty per cent grant for the installation of inverter technology on electric motors i.e. a variable speed drive, to take advantage of the substantial energy savings achieved by reducing motor speed. The types of businesses targeted were airports, factories, hospitals, cold storage and shopping centres.

There was one participant, with a total of 2 VSDs installed.

Measures Summary

Variable speed drives	2

ENA 18 04 ONP Variable Speed Compressors

This was a Non Priority Commercial scheme, that offered a grant of twenty per cent to replace single speed compressor with a new 'variable speed model' c/w air leak detection and repair surveys, taking advantage of the substantial energy savings achieved by reducing motor speed and minimising leaks. The types of businesses targeted were largely manufacturing and engineering.

In total 6 VSCs were installed.

Measures Summary

Variable speed compressors	6

ENA 18 09 O NP Intelligent heating controls

This was a Non-Priority scheme that offered a twenty per cent grant for the design and installation of an intuitive heating management system i.e. intelligent heating control. Retrofitted in an existing building heated by radiators it provides individual control of the heating times and temperatures within each room enabling significant savings. The types of businesses targeted were the care industry, offices, schools, and hotels.

In total 5 measures were installed.

Measures Summary

Intelligent heating controls	5

ENA 18 10 O NP Climateq Air Conditioning Attendant

This was a Non Priority Commercial scheme that offered a twenty per cent grant for the installation of an air conditioning optimisation device which optimises the use of existing air conditioning systems on a room occupancy basis. Energia targeted all businesses in Northern Ireland who had air conditioning systems and spaces with transient occupancy such as: offices, leisure, retail and hospitals.

There was no uptake with this scheme, so it was closed, and funds were reallocated to other schemes.

ENA 18 11 O NP Energy Screw Air Blowers (Innovation)

This was a Non Priority Commercial Innovative scheme that offered a thirty per cent grant for replacing rotary lobe blowers with new screw blowers which combine a screw compressor, a permanent magnetic motor, and an integrated frequency convertor which enable them to perform at high efficiency, even when operating at lower speeds. The types of businesses targeted were wastewater treatment works, food manufacturing and drinks manufacturing plants.

Measures Summary

Robox Screw Air Compressor	1

ESL 18 02 NP £250 Insulation Grant

This Non-Priority domestic scheme was designed to give grant assistance to insulate the cavity wall and the loft of a home. Homeowners were offered an up-front discount on both cavity wall and loft insulation. A minimum installation value of £300 applied for either loft or cavity wall installation work to qualify for the grant. The customer

received a maximum cashback of £250 on the installed costs for each type of insulation. The maximum grant available, where both loft and cavity wall insulation were installed, was £500.

There were 679 cashbacks provided.

Measures Summary	
Loft insulation	159
Cavity wall insulation	520

PNI 18 06 LNP Commercial LED Lighting

This was a Non-Priority commercial scheme that offered a twenty percent grant off LEDs. The scheme targeted premises where lighting contributed to a significant proportion of energy costs, therefore targeting businesses including SMEs and hospitality etc, that had a significant lighting load.

Measures Summary	
LEDs	2,570

PNI 18 07 ONP Variable Speed Drives

This Non-Priority commercial scheme offered customers a grant towards a range of variable speed drive options. In total 25 grants were offered to a range of local businesses. Customers received a minimum of twenty per cent up to a maximum of £10,000 or thirty-five per cent, whichever was the lesser amount. VSDs were offered to commercial customers who used motors for ventilation, water circulation and air compressors. These were most commonly found in factories and dairy farms.

Measures Summary	
Variable speed drives	25