

Home Energy Conservation Authority

Annual Progress Report
2022





Nicole Lappin
Chairperson



Grainia Long
Chief Executive

As the Strategic Housing Authority and Northern Ireland's largest landlord, the Northern Ireland Housing Executive provides a range of services to people living in socially rented, privately rented and owner occupied accommodation throughout Northern Ireland.

Under the terms of the Home Energy Conservation Act (1995), the Housing Executive fulfils a statutory role as the Home Energy Conservation Authority (HECA) for Northern Ireland.

This requires the Housing Executive to prepare an annual report setting out the practical and cost effective energy conservation measures (which includes information, advice and education, promotion, making grants and carrying out works), and subsequent greenhouse gas reduction across all the Northern Ireland housing sector.



The focus over the past year has been dominated by the ongoing 'Cost of Living Crisis'. As we emerge from the global pandemic and are impacted by the ongoing invasion of Ukraine, energy demand and supply issues have created the conditions for a cost of living crisis. As we work with the Department for Communities, the statutory and voluntary community sectors, and local Councils on this immediate priority, the Housing Executive welcomes the continued collaboration across the housing and communities sector to provide support for vulnerable householders.


During 2021/22, the Housing Executive, in conjunction with the Department for Communities, invested almost £36m on energy efficiency measures through a wide range of programmes, including enhancing thermal efficiency, window

replacement and heating replacement schemes. The housing association sector, provided a further £5m through a range of energy efficiency measures, including heating, improved insulation and renewable technologies. The NI Sustainable Energy Programme invested an additional £7.5 million in energy efficiency and heating programmes across the private and public sectors.

Across the housing and community sector collaboration and partnership, we collectively deliver positive change for householders, and I would like to thank the wide range of stakeholders from across central and local government, the energy supply sector, leading energy charities and social enterprises, who all support our HECA stakeholder panel, which has continued to meet regularly throughout the year.

As the Housing Executive continued our Retrofit Programme, funded in partnership with the European Regional Development Programme, across nearly 2,000 houses and pathfinder pilot projects we have gained experience and key learning points to enable the launch of our Sustainable Development Strategy and Action Plan (2022-2027) this year.

This strategy puts sustainability at the centre of our business areas to ensure householders "live and work sustainably" while protecting the environment with the vision that everyone should live in affordable, sustainable and decent homes, appropriate to their needs, in a safe and climate-resilient place.

The background of the page features a stylized illustration of a green landscape with rolling hills. Several wind turbines of varying sizes are depicted in white and light green, scattered across the scene. The largest turbine is in the foreground on the left, while others are smaller and further back, creating a sense of depth. The overall color palette is a range of green tones, from dark forest green to light sage green.

This strategy sets out a framework for helping tackle the climate emergency, and outlines the organisation's commitment to sustaining our environment for future generations and providing quality, affordable housing.

Over the next five years, we have committed to improving its social and environmental impact while addressing the cost of living crisis.

Strategic sustainable development targets include:

- A 6% reduction in carbon emissions by 2025/2026;
- As a landlord, retrofit housing to increase energy efficiency by 2030, plus a 23% reduction in carbon emissions up to 2030/31;
- A corporate 25% reduction in carbon emissions by 2030/31.

Key strategic actions include improving the organisation's built environment, supporting biodiversity, assisting sustainable communities and promoting sustainable transport. Educational empowerment leading to behaviour change is essential, and improved health and wellbeing outcomes through more sustainable living is also a key focus for change.

As housing professionals, we believe that by transforming the Northern Ireland housing stock we will lead the transformation of housing conditions, promote healthier households and deliver homes that are genuinely fit for the future.

We will continue to collaborate and partner across the housing sector to deliver sustainable communities and address climate and health inequalities.

Annually, across maintenance and the social housing new build programme (including private finance) over £500m of investment is delivered into the Northern Ireland economy, drawing on resources from the Department for Communities and the housing association sector.

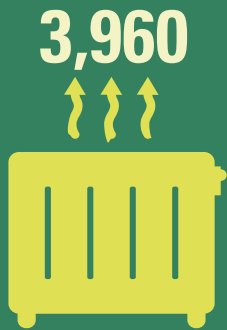
The Housing Executive is committed to ensuring all this investment is fully transformed into green growth in the medium term to ensure that "our economy is globally competitive, regionally balanced and carbon-neutral." This will reduce fuel poverty, improve our energy resilience and enhance our chances of addressing climate change.

A handwritten signature in white ink, appearing to read 'Nicole Lappin'.

Nicole Lappin
Chairperson

A handwritten signature in white ink, appearing to read 'Grainia Long'.

Grainia Long
Chief Executive



3,960

Heating and boiler conversions

£18.4m

invested in **Housing Executive** homes (starts)



2007

Double glazing installations

£4.3m

invested in Housing Executive homes (starts)



Affordable Warmth Scheme

£11.8m

of expenditure for 2,841 private sector homes (funded by DfC and managed by the Housing Executive in partnership with all 11 local Councils)



2,092

Boiler Replacement Scheme

£1.3m

funded for the installation new energy efficient boilers in new homes



NI Sustainable Energy Programme (NISEP)

£7.5m

on energy efficient schemes to help householders implement energy saving measures to their homes



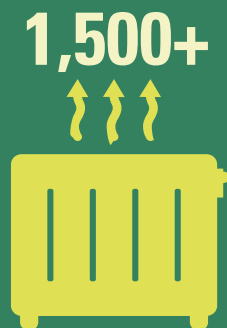
Oil buying clubs

1.95m

Litres of home heating oil delivered



Housing Executive continues to deliver monthly oil deliveries within manageable budgets



1,500+

Boiler upgrades

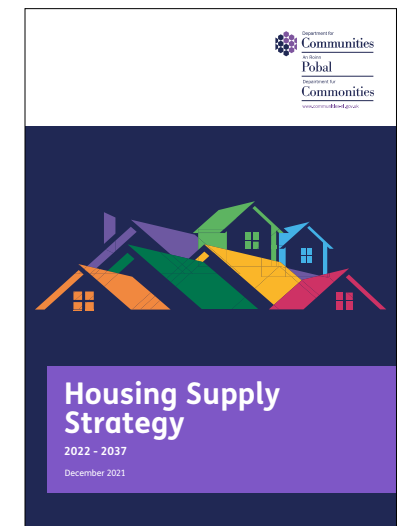
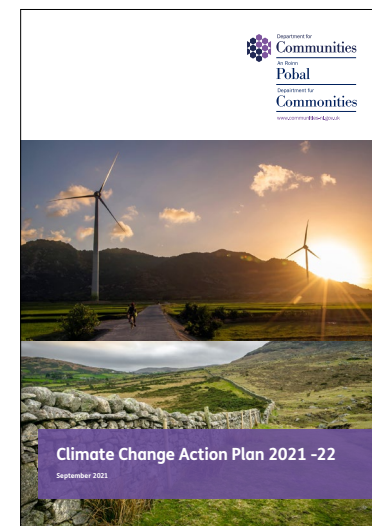
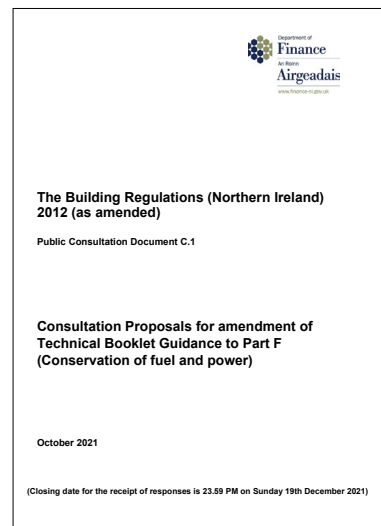
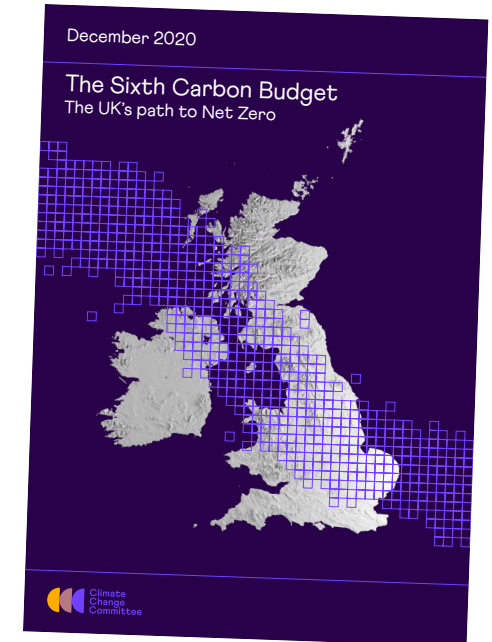
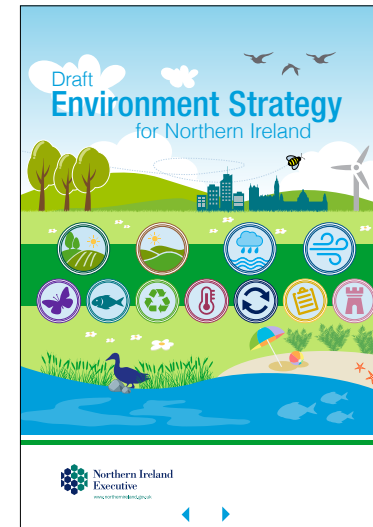
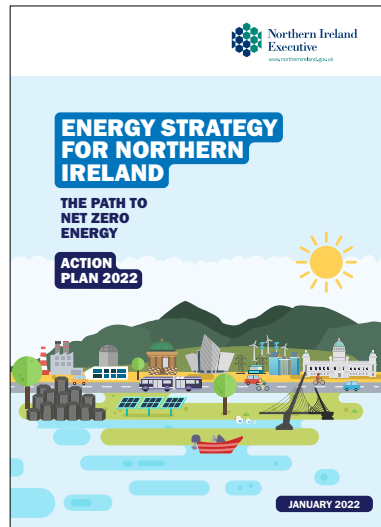
£5m

invested in **Housing Association** homes in the installation energy efficiency measures

2021/22 Investment

Strategic Context

UK Climate Change Act 2008 (2050 Target Amendment) - Net Zero



Strategic Context

Following the adoption of New Decade New Approach, which is a new shared strategic vision for Northern Ireland endorsed by all political parties, the Northern Ireland Executive began to develop its Programme for Government. Despite the challenges brought about by the cost of living crisis and emerging from the pandemic, several policies have been launched or are currently being drafted that are relevant to this Report.

These include:

Department for Communities Climate Change Action Plan which outlines the scale of the challenge of climate change and the actions the Department will take to reduce its impact across its diverse responsibilities.

Department for Communities Housing Supply Strategy (2022-2037) sets out a long term framework for the development of policy, interventions, and action plans to deliver the right homes in the right locations and address housing stress.

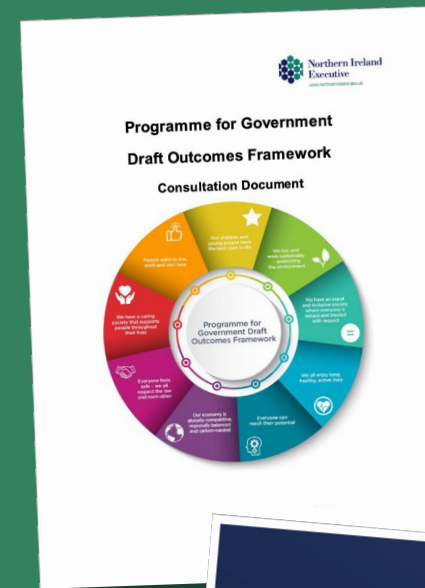
Building (Prescribed Fees) (Amendment) Regulations (Northern Ireland) 2022 that set the Department for Finance proposals for minimum standards for new build and retrofit standards with respect to carbon performance and energy conservation measures.

The Environment Strategy for Northern Ireland, being developed by the Department of Agriculture, Environment and Rural Affairs (DAERA) will guide how we can preserve, protect and improve our environment for our children and our grandchildren and will support the **Green Growth Strategy**.

The Energy Strategy for Northern Ireland - The Path to Net Zero Energy is the Department for Economy's pathway to 2030 to help achieve its long-term vision of net zero carbon and affordable energy for Northern Ireland. The Strategy will support the highest levels of energy efficiency, thus reducing the amount of energy we need whilst making sure the energy we do use comes from clean renewable sources. The Housing Executive is working closely with DfE as a delivery partner to achieve the vision of net zero.

The **Climate Change Act (Northern Ireland) 2022** has now been introduced and sets targets for the years 2050, 2040 and 2030 for the reduction of greenhouse gas emissions; to provide for a system of carbon budgeting; to provide for reporting and statements against those targets and budgets; to confer power to impose climate change reporting duties on public bodies; to provide for reports and advice from the Committee on Climate Change; and for connected purposes.

These policies provide the strategic framework for the Housing Executive to support the delivery of sustainable communities with social, environmental and economic benefits through green growth, health benefits, reducing fuel poverty and sustainable living.



Drivers for Change

Climate Change

Our climate is changing. We need to urgently reduce our greenhouse gas emissions to reduce the severity of climate change. Excess greenhouse gas emissions are causing the Earth's atmosphere to hold more radiation from the sun which is increasing the temperature of the planet. This change in temperature is altering our climate, and many of the changes are irreversible. In Northern Ireland, we will experience warmer, wetter winters and hotter, drier summers. However, cold snaps, drier winters and wet summers will occur, therefore we need to be prepared for a much greater range of extremes. We are already experiencing increased frequency and intensity of extreme weather events, and this trend is expected to continue for years to come. Even if all global emissions stopped immediately, we have already locked-in a certain amount of climate change.

Climate Risks

According to the Northern Ireland Flood Risk Assessment 2018, approximately 45,000 properties (c. 5%) are currently at major risk of flooding with expected annual damages for residential properties on average of £21.2 million¹. Socially vulnerable groups are disproportionately affected and experience more flood and other climate related risks than other groups. Belfast is one of ten UK local authority areas which accounts for 50% of the socially vulnerable people living in areas at flood risk. The third UK Climate Change Risk Assessment Summary Report for Northern Ireland assessed 61 risks and opportunities from climate change to Northern Ireland, including to business, infrastructure, housing, the natural environment, our health and from the impacts of climate change internationally. The report states that flooding remains the most severe climate risk for the UK. Climate change is also likely to increase the risk to building fabric from damp, high winds and subsidence. Hospitals and other health care services will experience service disruption due to direct impacts from extreme weather, and through the detrimental effects of extreme weather on people's health and wellbeing.

Climate Change Adaptation

Climate change poses considerable challenges to the everyday working and asset management of large organisations. It is important that we understand the risks facing us and take steps to prepare. This is called 'climate change adaptation planning'. The adaptation challenge for the Housing Executive involves significant risks of flooding, heat stress and storms. An adaptation plan should be established to future proof our estate and protect people from climate shocks and stresses. The development of a Climate Adaptation Plan is therefore a key action within our Strategy. It will cut across all of the Housing Executive's business areas and provide a detailed action plan to increase the resilience across our estate and operations. This adaptation plan also creates opportunity to deliver new economic activities, skills and jobs; this is an essential part of a just transition and will help to reinforce community income and cohesion.

Fuel Poverty

Around 179,000 households in Northern Ireland are in fuel poverty, based on modelled estimates from 2016-2019 using the 2016 House Condition Survey. This represents an average fuel poverty rate of 24%², which is predicated on a high dependency of imported fossil fuels and low household income rates. There is an urgent need to reduce fuel poverty through energy efficiency and low carbon heating, which will improve the health and wellbeing of householders. Fuel poverty is a key driver for retrofitting and energy efficiency improvements in the housing sector and can result in a climate social welfare dividend. Household income, energy prices and market volatility also affects fuel poverty. We have seen increases in electricity and gas prices due to changes in international wholesale fuel costs. A key strand of the Housing Executive Home Energy Conservation Authority's role is the provision of impartial free energy advice and facilitating the reduction in household energy costs.

1. <https://www.ukclimaterisk.org/wp-content/uploads/2020/07/Future-Flooding-Main-Report-Sayers-1.pdf>

2. The Housing Executive acknowledges that the fuel poverty rate may potentially increase with the current cost of living crisis.

Sustainable Development Strategy & Action Plan (2022-2027) launch

The Housing Executive launched our Corporate Sustainable Development Strategy and Action Plan which outlines our commitment to sustaining our environment for future generations and providing quality, affordable housing, while producing net zero carbon emissions by 2050.

Over the next five years, as the strategic housing authority for Northern Ireland, we have committed to improving our social and environmental impact while addressing the cost of living crisis.

Strategic sustainable development targets include:

- a 6% reduction in carbon emissions by 2026;
- as a landlord, retrofit housing to increase energy efficiency by 2030, plus a 23% reduction in carbon emissions up to 2030/31; and
- a corporate 25% reduction in carbon emissions by 2030/31.

Key strategic actions include improving the organisation's built environment, supporting biodiversity, assisting sustainable communities and promoting sustainable transport.

Educational empowerment leading to behaviour change is essential, and improved health and wellbeing outcomes through more sustainable living is also a key focus for change.

Speaking at the launch, our Chief Executive Grainia Long said:

"Alarm bells about climate change and soaring wholesale energy prices have brought the urgency of the climate and energy crisis into sharp focus".

"We recognise the need to decarbonise the built environment and we are determined to influence future best practice through innovation and collaboration".

"In this strategy we have put sustainability at our core, meaning we want to transform everything we do with an intent and urgency on the need to decarbonise our stock, improve energy efficiency, support the building of low-carbon homes and decarbonise our fleet," she said.

"The funding and scaling up of implementing energy efficiency measures across Northern Ireland is urgently required across all tenures, not just social housing, and we have a great opportunity to do this on a cross-governmental basis.



"We know that 14% of greenhouse gases come from the residential sector and, in our unique role as Northern Ireland's largest landlord and its Home Energy Conservation Authority, we must play a leading role in reducing greenhouse gas."

The Chief Executive said that decarbonising Northern Ireland's housing stock was not only an essential part of tackling the climate emergency, it also combated fuel poverty, stimulated the economy, created jobs, provided warmer homes and cleaner air and supported biodiversity.

"Last year we invested £35m specifically on energy efficiency improvement measures within both Landlord and Regional Services.

This investment includes the rolling out of one of the largest retrofit programmes across the UK, which will see vast improvements in the energy performance of almost 2,000 of our homes. It includes improving thermal efficiency in aluminium bungalows and 'no fines' dwellings through the provision of new external wall cladding, new double glazing, improved ventilation and loft insulation," she continued.





"At the core of the programmes is a range of innovative technologies to address the impact of climate change and improve sustainability. Taking a 'fabric first' approach to the decarbonisation of homes, and delivering at scale in this decade, presents a once in a generation opportunity to improve housing standards, reduce energy costs of households and create jobs.

However, achieving our ambitions will require very significant investment in energy efficiency measures, the funding for which will not be available under our current funding regime.

Consequently our 2030/31 targets for our housing stock will be reviewed as the issues of funding, technology and sector capacity become more clear towards the end of our initial five year action plan period."

Grainia Long, Chief Executive

Adrian Blythe, Quality Improvement Manager

Robert Clements, Head of Sustainable Development



OUR GOAL

NET ZERO

in all our operations by

2050



Sustainable Development Strategy & Action Plan (2022-2027)

The vision of this strategy is built upon the United Nations' 17 Sustainable Development Goals that provide an internationally agreed performance framework designed to achieve a better and more sustainable future by 2030.

Our Vision

Everyone is able to live in an affordable, sustainable and decent home, appropriate to their needs, in a safe and climate-resilient place

Our Goal

Net Zero in all our operations by 2050

Our Targets

On the pathway to our Goal we aim to achieve the following:

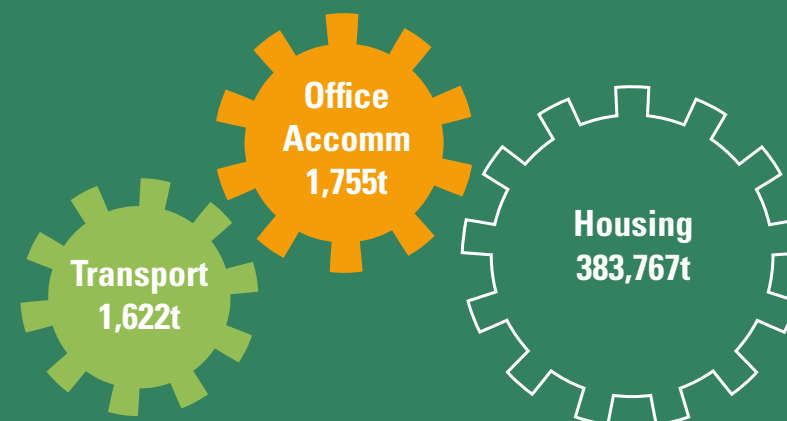
- Short Term
Housing (NIHE Landlord) Target: 25,000 tonnes of CO₂ Reduction up to 2025/26 (6%)
- End of Decade

Housing (NIHE Landlord) Targets

- Retrofit housing to upgrade energy efficiency to SAP Band C by 2030
- 89,000 tonnes of CO₂ Reduction up to 2030/31 (23%)

Corporate Target (NIHE Business) Target: 25% Reduction in CO₂ emissions by 2030/31

Office Accommodation	Transport (Business mileage & DLO fleet)	Landlord Housing (83,913)
1755 tCO ₂	1622 tCO ₂	383,767 tCO ₂
0.5%	0.4%	99.1%
↓23.6% CO ₂ emissions from office accommodation (electric, gas and oil) fell by 23.6% in the period 2016/17 to 2019/20.	↓50% CO ₂ emissions from business mileage fell by over 50% between 19/20 to 21/22 (largely due to restrictions attributed to Covid pandemic)	SAP 63 Average SAP rating of a Housing Executive property is 63 (Band D) which is below the social housing average of 72.639



Sustainable Development Strategy and Action Plan (2022-2027)

Delivering Sustainable Homes and Communities

For Housing Executive, Tenants, Communities, Supply Chains and Stakeholders

PEOPLE			PROPERTY	PLACES
Education and Empowerment Leading to Behaviour Change	Health Wellbeing and Sustainable Living	Sustainable Transport Solutions	Built Environment	Sustainable Communities
<ol style="list-style-type: none"> 1. Our staff, tenants and supply chain will be aware of the impact of everyday activities on the climate and will be encouraged to take action to become more environmentally responsible as individuals and organisations. 2. The technical skills shortage in the construction industry will be addressed with greater capability and competency in the industry to facilitate sustainable construction and retrofit works. 3. Equal gender representation, participation and leadership across all business areas in the Housing Executive. 	<ol style="list-style-type: none"> 1. More sustainable dietary choices, including lower meat consumption, improve health outcomes. 2. More green space on our estate. 	<ol style="list-style-type: none"> 1. More active travel by providing support for walking, cycling and e-bikes. 2. People are encouraged back onto public transport, where there has been a shift to car travel. 3. Increased ownership of EV's and a phase out of petrol and diesel vehicles. 4. Business mileage is significantly reduced and flying is considered the exception rather than the norm. 	<ol style="list-style-type: none"> 1. Energy efficiency is a major infrastructure priority which has led to large-scale energy efficiency retrofitting and reduced energy demand. 2. A transition to low and zero carbon heating systems in new build and retrofit. 3. New builds, if needed, are built to be low-carbon, energy and water efficient, and climate resilient. 4. Education and empowerment of householders to understand new technology and systems to encourage environmentally responsible behaviours. 	<ol style="list-style-type: none"> 1. Increased social, economic, and environmental wellbeing of districts and the people who live there through Community Planning. 2. More social value being delivered through the social enterprise sector. 3. Local communities working together to secure low-cost energy.
Governance: Carbon Monitoring, Environmental Management, Environmental Benchmarking, Sustainability Audit, Green Growth and Sustainability Action				
Leadership and Collaboration through External Funding Opportunities for Zero Carbon Projects				
PLANET				

Cost of Living Crisis - What is it and what are the Housing Executive doing to alleviate the rising cost of living?

The effects of a global pandemic and the ongoing war in Ukraine has created a cost of living crisis. This 'cost of living crisis' refers to the fall in disposable incomes that the UK has experienced since late 2021¹. It is being caused (mainly) by high inflation, outstripping wage and benefit increases and has been further exacerbated by recent tax increases. Inflation hits those on lower incomes disproportionately hard, Northern Ireland fares worse than other UK regions²: it has the UK's highest proportion of low-paid jobs (almost one in five), the lowest discretionary disposable income, and therefore local households spend disproportionately higher amounts of their income on energy, food and fuel relative to the rest of the UK.

Households are facing increasing challenges in meeting living costs. In particular, food, motor fuel and energy prices have been amongst the fastest rising costs. The ONS³ reports that food and non-alcoholic beverage prices have risen by 9.8% in the year to June 2022, the highest rate since March 2009. Householders are experiencing notable increases in their grocery bills, and this looks likely to continue, with Kantar forecasting that average grocery bills are set to rise by £454 per year⁴.

Similarly, households are facing increasing costs for petrol and diesel. Motor fuel inflation has risen sharply over the last 2 years, and increased by 42.3% in the year to June 2022. The changes in average petrol prices are stark, with June 2022 seeing the highest price on record (since 1990) at 184 pence per litre in June 2022 and diesel at 133.4 pence per litre.

The UK is in an energy crisis. The big factors in setting energy prices are supply and demand. A recent cut in availability to the UK saw natural gas prices surge to their highest levels since early March 2022. This cut pushes up costs for businesses and households across Europe and is driving rising inflation⁵. It fuels fears of a potential recession.

Home heating oil prices in Northern Ireland reached over £1 per litre (June 2022), more than double the ten-year average price, and prices have only been higher for one week this decade according to the Consumer Council's weekly heating oil survey. The combined effect of heating, electricity, and fuel price increases mean the average Northern Ireland consumer (homeowner or tenant) will have to find an extra £1,300 or more for bills in the year ahead⁶.

Energy costs have increased sharply, largely due to a surge in wholesale gas prices. From 1 April, when the energy price cap was raised, a consumer increase of £693 (direct debit, prepayment is around £30 more), a rise in energy bills from £1,277 to £1,971 per year⁷.

Wholesale gas prices remain extremely high and volatile. The energy regulator Ofgem has warned that the price cap will likely increase to around £2,800⁸. Northern Ireland home heating fuel prices more than doubled between June 21 and 2022. This sudden rise in both gas and oil prices is a stark reality facing for our customers and tenants 68%, of those NI households that must use oil to heat their homes - with many living in rural areas with the highest fuel poverty⁹.

The Housing Executive work with the Department for Communities, alongside local Councils across Northern Ireland, in the delivery of the Affordable Warmth Scheme. In 2021/22, we spent £11.8m in providing 4,585 energy efficiency measures in 2,841 homes. In 2022/23, £16m has been allocated to this scheme and through it we plan to install 4,705 energy efficiency measures in 3,137 homes.

1. Institute for Government, July 2022

2. Bank of England, Monetary Policy Report - February 2022, 3 February 2022, www.bankofengland.co.uk/monetary-policy-report/2022/february-2022

3. Office for Nation Statistics: Consumer price inflation, UK Consumer price inflation, UK: June 2022. <https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/june2022>

4. Kantar (July 2022) <https://www.kantar.com/uki/inspiration/fmcg/2022-wp-grocery-prices-continue-to-climb-as-brits-prepare-for-scorching-summer-heat>

5. Russia cuts gas through Nord Stream 1 to 20% of capacity | The Independent

6. July 2022 | Consumer Council

7. <https://www.ofgem.gov.uk/publications/price-cap-increase-ps693-apr>

8. Telegraph – FTSE 100 Markets

9. 3 June 2021 | Consumer Council

As the Home Energy Conservation Authority (HECA) we provide impartial and free energy advice to households across Northern Ireland, via the NI Energy Advice Service. This service manages over 5,000 householder queries per year, with a focus on energy efficiency advice, signposting to grant schemes and an oil buying club network.

As the strategic housing authority and as a landlord, in 2021/22, we invested £35.975m¹⁰ in our homes, of which approximately £22.7m directly benefitted our tenants via double glazing, heat and loft insulation schemes.

Since January 2020, we have implemented a new financial inclusion service for our tenants delivered by specialist Financial Inclusion Managers. This service helps to ensure that our tenants are claiming and receiving all benefits that they are entitled to. It advocates on behalf of tenants involved in claims or appeals processes, provides debt advice and onward referral to specialist debt services. The service also facilitates access to other forms of support, such as charities and foodbanks etc. To date, our Financial Inclusion Managers have assisted more than 5,000 tenants and receives approximately 205 referrals per month. We are currently in the process of expanding this service to help increase capacity and meet rising demand.

Our front line staff also help to improve the financial well-being of our tenants through a bespoke 'Making Your Money Work' service. This service provides advice via a special App for household budgeting and benefits entitlement. It also makes referrals for independent debt advice and for floating support services for tenants with perceived vulnerabilities.

We are continuing to facilitate a network of oil-buying clubs across Northern Ireland to help reduce home heating costs. These are open to all NI householders, both public and private sector, and have proven to be very effective in providing savings for individual members.

The well-being of our tenants is also at the forefront of our Tenancy Sustainment Action Plan (TSAP) for 2022-2024, which has been shaped to take account of the cost of living crisis. Some of the planned actions under the TSAP include: a scheme for new tenants to affordably access mattresses for their family; financial support towards energy bills; support for existing employability and skills programmes; and a review of advice to help prevent condensation and damp.

Since the beginning of 2022, we have awarded £1.5m to projects that promote tenancy sustainment and support the well-being of our tenants in their homes, via grants to Community and Voluntary partners of up to £50k each.

In relation to our Housing Benefit Service, we have introduced a number of measures to support our customers, which includes Discretionary Housing Payments (DHP). From April 2022 to June 2022, we made DHP to 5,756 claimants, who have a shortfall in rent charged by their landlord and available housing benefit.

We continue to work with the Department for Communities (DfC) and the advice sector (Housing Rights, Advice NI and the Law Society) to promote the availability of DHP. We also run regular publicity campaigns and work with colleagues in DfC to help promote it.

All of our relevant staff have been trained to provide advice on Housing Benefit or Housing Costs within Universal Credit and regularly signpost customers to 'Make the Call' services, to carry out benefit checks, as needed. These staff also work closely with Housing Services and all of the NI Housing Associations at a local level.

There is a Housing Benefit calculator on our website with guidance to signposting and other support advice, if required and customers can get in touch with us through our local offices. We also offer a range of flexible and tailored repayment options for customers with Housing Benefit overpayments.

This year's edition of 'Quid's In' magazine, (targeted at Housing Executive tenants), was devoted to the cost of living crisis and included articles that provided our tenants with useful advice and assistance.

As the cost of living crisis is expected to run well into next year any additional resources allocated to the Housing Executive will help alleviate its impact and protect the physical and mental well-being of all our tenants.

10. * This excludes a €27m investment over three years retrofitting up to 1,900 Housing Executive homes, as part of our Housing Executive-European Regional Development Fund funded retrofit programme.

*Improving domestic
energy efficiency*

Home energy



*Reducing
fuel poverty*

Fuel poverty



*Living sustainably,
saving the
environment*

Environment



*To have a
more equal society*

Equality



How to save energy

Measurable outcomes - baseline, actions and progress



Advice

*Improved access to advice,
improved connectivity with
residential customers*



Reduce

*Implement energy
efficient schemes
within social and
private housing sectors*



Protect

*Increase electricity
consumption from
renewable resources,
research and install
innovative measures*



Measure

*Energy mix,
reduce oil
dependency,
gas to the west*



Improving domestic energy efficiency

Measuring progress across all dwellings



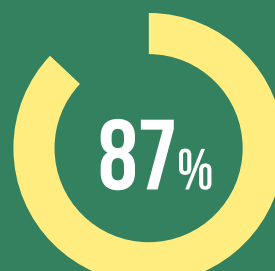
have central
heating



still use home
heating oil



have loft
insulation



have full
double glazing

SAP ratings

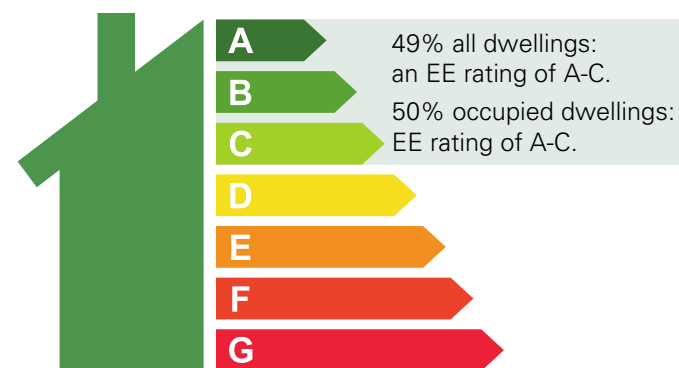
The Northern Ireland House Condition Survey (HCS), is the primary data source for assessing progress of energy efficiency across the NI residential sector. As noted, the Standard Assessment Procedure (SAP) is the Government's standard method of rating the energy efficiency of a dwelling. The overall SAP rating for Northern Ireland in 2016 was 65.83, using the latest SAP model.¹ Social housing had the highest SAP Mean rating (72.63) and vacant dwellings had the lowest SAP rating (51.78). During the 5-year period from 2011 to 2016 there was total investment of £300m in the provision of energy efficiency measures, which contributed significantly to achieving higher SAP ratings.²

As highlighted in our recently published Sustainable Development Strategy even more investment is now required to meet the targets of Net Zero. The Department of the Economy's 'Future of Energy Efficiency Policy in Northern Ireland' 2020 report highlighted: 'In order to align with 2050 net zero commitments, it is estimated that policies would need to drive an annual peak of retrofits for over 50,000 buildings within the next decade. By comparison, current energy efficiency programmes in Northern Ireland deliver measures for approximately 16,500 buildings per year, indicating that a doubling or trebling is needed.'

1. The SAP model was modified between 2011 and 2016 in order to improve the accuracy of energy efficiency ratings.

2. 2016 Northern Ireland Housing Executive HCS.

The Energy Efficiency Rating (EER) uses an A-G banding system



64%

Households with
children were most likely
to live in dwellings in
EER bands A-C



38%

of older households had
an EE rating of A-C

EE rating of A-C



79%

Social housing



45%

Owner occupied

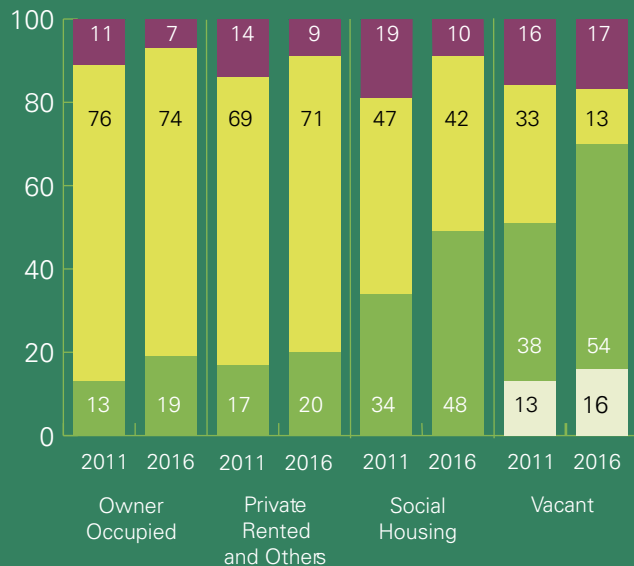
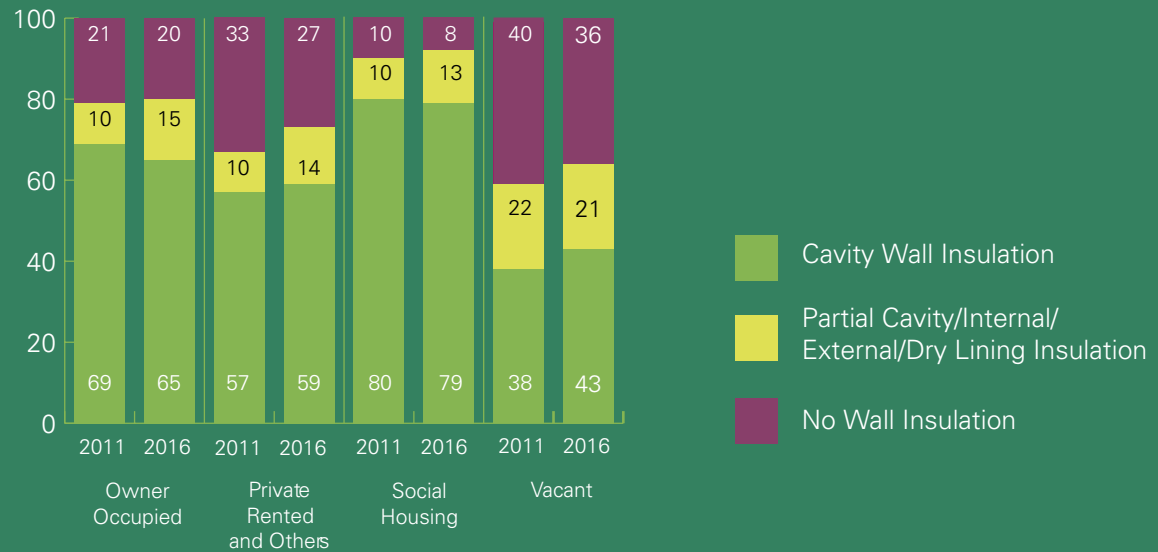


43%

Private rented and
others

Home Insulation

The proportion of housing stock with full cavity wall insulation is 65%, based on the 2016 HCS; this figure has remained static since the findings of 2011 HCS. As the 2016 HCS noted, 'this was expected, as there hasn't been the same level of investment in cavity wall insulation as there has been in loft insulation, double glazing or the replacement of solid fuel heating.' As part of the 2016 HCS, an examination of the extent of cavity wall insulation (by tenure), provided the following results:



Gas Oil Other None

Domestic Heating

At present, Northern Ireland has the highest level of dependency on high-carbon fossil-fuel across the UK - with 68% of households dependent upon home heating oil.

This, coupled with the significant hike in energy costs which commenced in winter 2021 and is still continuing, the Housing Executive is not only focused on the immediate energy costs but the sustainable solutions which will insulate householders from the volatility of the world energy market.

The Housing Executive is currently developing a low carbon programme to provide medium to long term solutions which can influence Northern Ireland housing in its role as the Strategic Housing Authority and NI's largest housing landlord.

The Housing Executive's indicative planning assumption of a future Decarbonised Heating Pathway could include: New Build housing - heat pumps in the medium/long term and potentially bio

methane in the short on the gas network. Off the Gas Grid: Medium term transition to heat pumps, dependent on improved retrofitting.

On the Gas Grid: Housing on the gas grid can potentially transition to green gas alternatives which could include bio methane in the short term and potentially green hydrogen in the long term. Electrification of heating is also a clear option for retrofit on the gas grid. Regardless of the heating type, improved retrofitting should promote a fabric first approach.

Low-carbon heat networks: The Housing Executive supports the development of Low-carbon heat networks, particularly in urban and new build scenarios. It is often said there are 'no silver bullets...' and therefore we believe 'a rich tapestry of options to deliver heat' is a sensible approach.

For the Housing Executive role as landlord, future improvements is based on a revitalised funding model and sustainable rents.

CO₂

Energy Consumption and Carbon Dioxide (CO₂) Emissions within Northern Ireland's Housing Stock

The Housing Executive commissioned the Building Research Establishment (BRE), to interrogate the 2016 HCS data to produce an updated assessment of progress against the original HECA baseline statistics identified in 1996.¹

Key findings

In the 2016 HCS, the improvement in energy efficiency, since 1996, was 29.1% from the occupied pre-1996 housing stock. This was measured, in the 2011 HCS, as a 22.5% improvement in energy efficiency and the latest data demonstrates continued progress in this key measurement.²

Methodology

The analysis provides the CO₂ emissions from dwellings in Northern Ireland from the following activities:

- Water heating
- Lights and appliance use
- Cooking

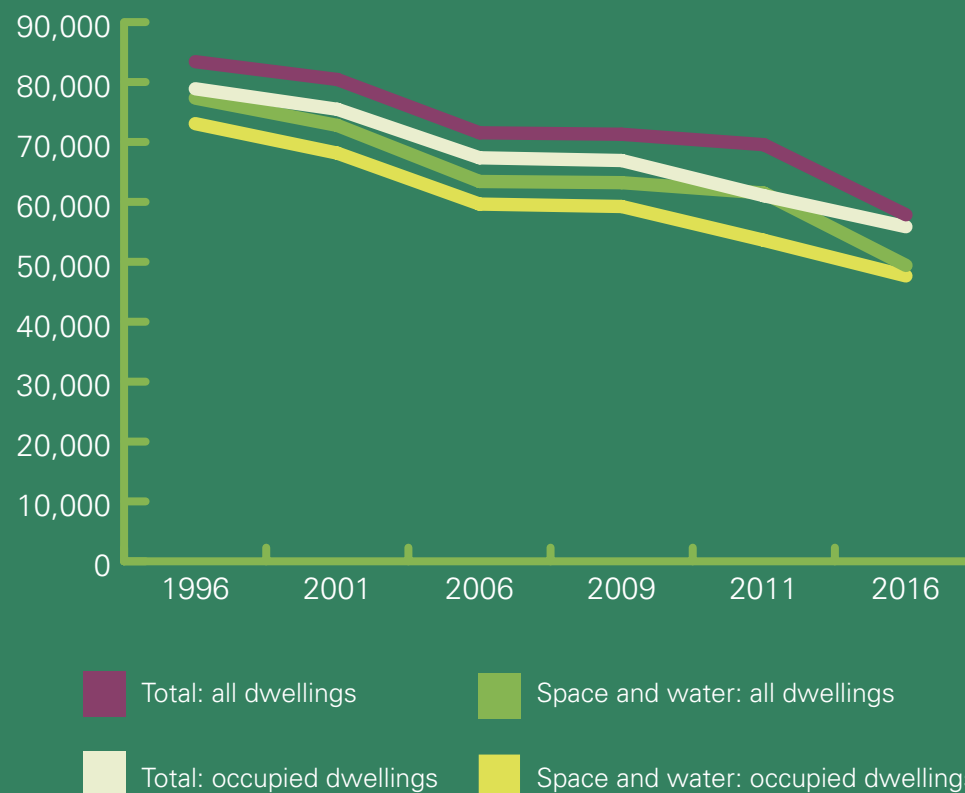
Energy Consumption Results

The consumption and emissions results are also presented for space and water heating only, thereby excluding lights, appliance use and cooking. This approach can be useful when analysing the effect of improvements to the building fabric and heating systems.

It is clear that the general trend since 1996 has been towards a reduction in energy consumption. This is consistent with improvements to dwellings' fabric energy efficiency (in particular cavity wall insulation) and heating system improvements (condensing central heating systems replacing older, less efficient systems). The decrease in energy consumption over the latest five year period, 2011 to 2016, for the occupied stock only, is similar to the previous 5-year period (2006 to 2011).

The total CO₂ emissions for all dwelling reduced by 30% from the 1996 baseline (based on 2016 data)³.

Energy consumption in pre-1996 dwellings (Terajoules/year), 1996-2016



1. BRE is the world's leading building science centres, and provides training, publications, advice and digital tools for the construction industry.

2. Based on measurement of modelled standardised consumption by BRE.

3. <https://www.nihe.gov.uk/Documents/Research/HCS-2016-Additional-Reports/Carbon-dioxide-emissions-NI-housing-2016.aspx>

Carbon Dioxide Emissions Results

The emissions are constructed by taking the consumption and then applying associated emissions factors (from the SAP specification) for each fuel being used in the dwelling.¹

The graph opposite shows the total CO₂ emissions for all dwellings reduced by 30% from the 1996 baseline (based on 2016 data).²

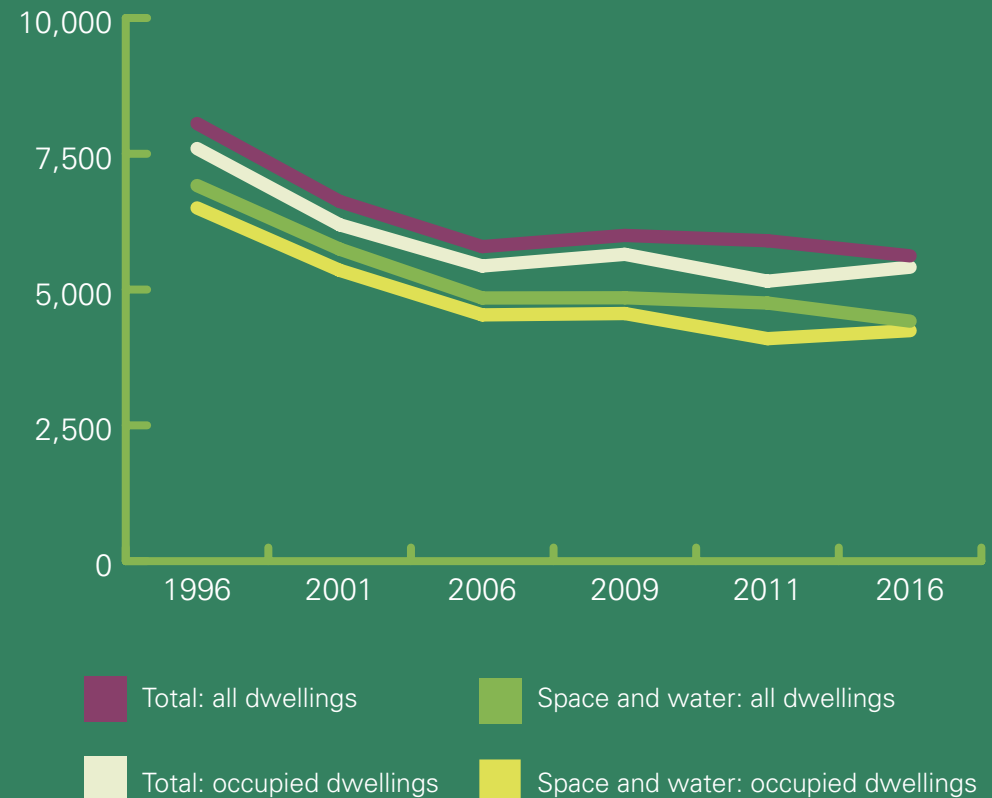
This will be dominated by the space and water heating fuel in use in each dwelling, typically oil, gas or electricity. Emissions from lights and appliance use are calculated using the carbon dioxide factor for electricity.

The results presented here use different emissions factors for different years to reflect the fact that the carbon mix of electricity generation has changed over the years as has the carbon intensity of other fuels, and the understanding of emissions associated with each fuel.

CO₂ emissions exhibit a similar pattern of reduction to energy consumption apart from in 2009³.

CO₂ emissions
↓ 30% reduction
(1996-2016)

Carbon dioxide emissions from pre-1996 dwellings (Kilotonnes/year), 1996-2016



1. The CO₂ emissions are taken from the pre-1996 dwelling stock.

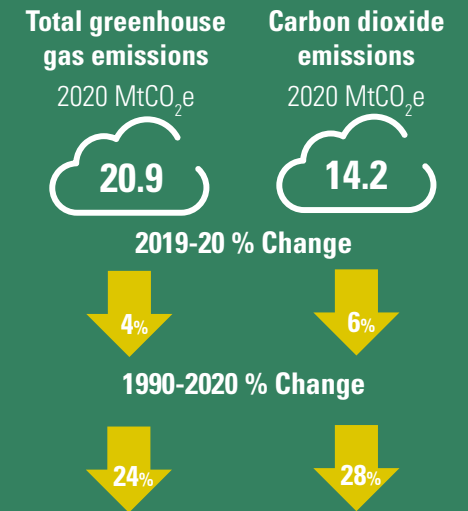
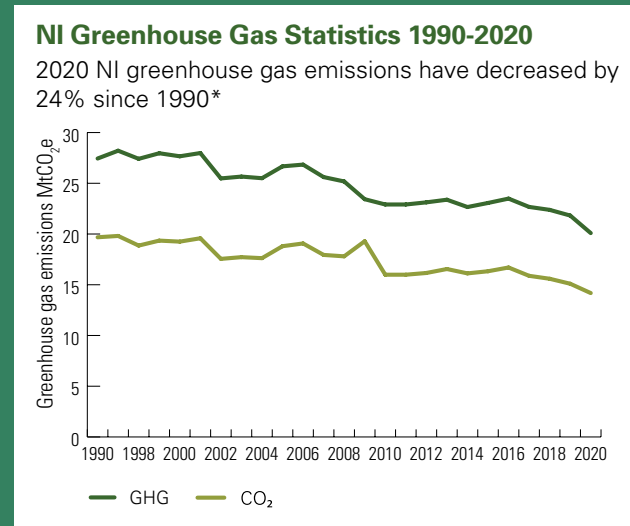
2. In 2009, the modelling switched to using the SAP 2009 carbon emissions factors which incorporated factors for electricity which are significantly higher than in the SAP 2005 specification.

3. In 2009, the modelling switched to using the SAP 2009 carbon emissions factors which incorporated factors for electricity which are significantly higher than in the SAP 2005 specification.

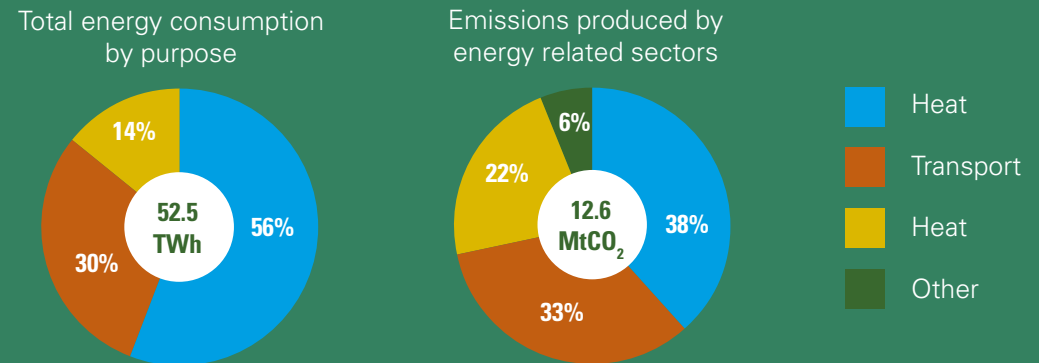
DAERA - Northern Ireland greenhouse gas inventory 1990-2020 statistical bulletin

This annual statistical bulletin provides headline figures on greenhouse gas emissions for Northern Ireland both by source sector and end-user for the years 1990 to 2020. In 2020, Northern Ireland's greenhouse gas emissions were estimated to be 20.9 million tonnes of carbon dioxide equivalent (Figure 1). This was a decrease of 4% compared with 2019. The longer term trend showed a decrease of 24% compared with the base year¹.

- The largest sectors in terms of emissions in 2020 were agriculture (27%), transport (16%) and residential (14%). Most sectors showed a decreasing trend since the base year.
- The Residential and Transport sectors are the largest source of greenhouse gases that relate to the Housing Executive's functions, however, influencing people's behaviour to reduce meat consumption will have an impact on the agriculture sector (27%). Within the residential sector improving energy efficiency to reduce energy demand and decarbonising heat is critical.
- The largest decreases, in terms of tonnes of carbon dioxide equivalent, were in the energy supply, waste management and residential sectors. These were driven by the energy sector fuel switching from coal to natural gas, a move replicated within the residential sector and the introduction of methane capture and oxidation systems in landfill management.



Emissions and energy across heat, power and transport in 2019



Agriculture was the largest emitting sector of NI greenhouse gas emissions in 2020

27%

Agriculture

16%

Transport

14%

Energy Supply

13%

Business

14%

Residential

11%

**Land use, land use
change and forestry**

3%

**Waste
management**

2%

Other

1. There is a variance in data from the carbon reduction in the House Condition Survey 2016 and the latest DAERA statistics, 2019, which can be attributed to different timelines and the use of different data sets. Both reports indicate a step change in approach is required to achieve net zero by 2050, as over the previous 30 years NI has reduced less than 30% carbon.

NI Energy Advice Service

As the Home Energy Conservation Authority for Northern Ireland, part of the Housing Executives strategy to deliver its statutory responsibilities is to promote energy efficiency and advice to all households. Since April 2020, the refreshed Northern Ireland Energy Advice Service, delivered in house by the Housing Executive, has received over 14,000 queries up to 31 December 2022.

The NI Energy Advice Service (NIEAS) provides free information and advice on energy efficiency, grant availability, cost savings and renewables. This advice offers vital help via energy cost saving information to vulnerable householders, older people and those on low incomes and answers over 5,000 queries annually. The NIEAS team annually signpost nearly 4,000 customers to available energy grants such as the Housing Executive Boiler Replacement Scheme; a Council-led targeted Affordable Warmth Scheme, aimed at those in fuel poverty and those more vulnerable within our society, and the Utility Regulator's Northern Ireland Sustainable Energy Programme (NISEP).

- Customers have been empowered by relevant up-to-date energy advice.
- Energy Advisors provide high quality, accurate written and telephone advice, which engages customers and is actionable. This advice helps them to save money on energy bills and reduce their carbon footprint.
- Customers can 'Get in Touch' now to find the most appropriate help for their needs. The Service sign-posting to relevant available grants.
- Customers can complete the eForm at nihe.gov.uk (search for NI Energy Advice). Email nienergyadvice@nihe.gov.uk. Call FREE 0800 111 4455.



Siobhan McCauley, the Housing Executive's Director of Regional Services, explains why the organisation now funds and operates the Service:

"As the Home Energy Conservation Authority for Northern Ireland we have a statutory duty to promote energy efficiency and advice to all householders. With the refreshed Northern Ireland Energy Advice Service we want to ensure all householders are able to have easy accessible free impartial advice that will help people save money on their energy bills and reduce their carbon footprint."

The Housing Executive provides a wide range of housing support to both public and private sector householders, and from April 2020 we have been successfully delivering the Northern Ireland Energy Advice Service. This service is managed and operated by the Housing Executive and funded by Department for Communities (DfC)"

Statistics for customer enquiries to the NI Energy Advice Service regarding home heating, insulation, renewables for heating and home energy.

**Contact us on:
0800 11 44 55**



5,010

customer enquiries facilitated in 2022



2,672

(53%) customers reported boiler over 15 years slowing down, stopping or broken



2,714

customers with oil as their fuel source



1,301

customers with gas as their fuel source



3,452

(68.9%) customers reported homes hard to heat

Schools' Energy Efficiency Awareness Programme (SEEAP)

The Housing Executive launched a refreshed NI Energy Advice Service in April 2020. A further component of this service involves the previously outsourced Schools' Energy Efficiency Awareness Programme (SEEAP).

SEEAP encourages pupils' awareness of energy use, and under 'The World Around Us', an Area of Learning in the Primary School curriculum, seeks to encourage action through informative presentations, activities and learning resources.

We align our learning objectives to support the future success of Science, Technology, Engineering and Mathematics (STEM) across the education sector.

The Housing Executive's ongoing relationship with Keep Northern Ireland Beautiful (KNIB) led to a NI-wide environmental awareness programme network covering 11 major environmental topics. These topics are supported by DAERA partnering with Translink; Mars Wrigley; Granville Park; Trocaire; our 11 local Councils, and a host of associated sponsors and support organisations.

The Housing Executive, through grant-aid to Keep NI Beautiful, will sponsor the 'Energy' topic for all NI Schools as part of Eco-Schools Programme.

Both the Housing Executive's SEEAP and Eco-Schools reflect the aspirations of the Sustainable Development Goals (SDG) and, in turn, are aligned to the ambitions regarding energy efficiency outlined in the new Programme for Government (launched in January 2021).

As part of the 2022 energy awareness competition, schoolchildren across NI were invited to design five eco-villains. A total of 1,700 children took part with the winners coming from Belfast, Derry/Londonderry and Ballygawley. Primary 3 to Year 9 pupils were invited to draw a picture and write a short story describing their Eco-Villain and their superpowers to help highlight issues such as energy efficiency in the home and school, renewable energy and climate change. P1 and P2 pupils were tasked with colouring eco-villains posters.

As part of the prize, the top five winning designs were brought to life by a local illustrator. The winners received a new eco-laptop plus £500 for their school. Five runners-up also won a Fire Tablet.

Key topics highlighted in the designs were energy efficiency, water, and renewable energy versus fossil fuels, climate change and global perspectives.



Housing Executive former Chair Professor Peter Roberts, who championed the annual Energy Competition, said: "The eco-villain competition is part of the Northern Ireland Schools Energy Awareness Programme.

"Last year we asked pupils to design five eco-heroes and the results were fantastic. This year, we thought we would turn the tables and ask our budding young eco-warriors to create villains instead.

We were very impressed with the standard of entries and the amazing imaginations of those who took part. Most young people care deeply about environmental issues and want to make a positive change in the environment around them. This competition provides an ideal way to foster their awareness of these hugely important matters.

The real reward is that the participants can help to shape the future world that they will inhabit."

Architects of Change Phases I & II

Within the Housing Executive's Energy Conservation Strategy, the education of schoolchildren in the promotion of energy awareness is a key theme. Although providing energy efficiency education is not a statutory function, it is one of the Housing Executive's key strands to support the statutory functions within the Home Energy Conservation Authority (HECA) role.

In March 2021, Ulster University, in collaboration with co-funder Belfast City Council, commenced delivery of Phase 1 of the Architects of Change Programme (AoC), with the recruitment and appointment of a dedicated Research Assistant. The pilot phase that ran until June 2022, puts Ulster University students at the centre of a sustainability and carbon emissions training programme, which serves to support environmentally and socially sustainable practice within organisations - particularly for those non-specialist business leaders.

While Architects of Change Phase I, intended to facilitate an improved response to our current climate emergency (through integrated sustainability research and education for business leaders), there is another opportunity to deliver a similar Programme to those at the other end of the spectrum - children and young people (Phase II).

Architects of Change II will offer an additional, complementary mode of educating and empowering young people to become change-makers for an environmentally sustainable world - through an inter-school training initiative, which will facilitate the sharing of ideas and good practice. With direct involvement from the Housing Executive Schools' Energy Awareness Programme (SEAP), Architects of Change II aims to develop meaningful, purposeful and sustainable cross-community engagement for children and young people, initially in the catchment area of the University's Belfast campus.

Ulster University have developed content and organise a series of workshops tailored to the needs of children in KS2 (pupils aged 8 to 11) and KS3 (pupils aged from 11 to 14). The topics include subjects as diverse as Climate Change; Natural Catastrophes; Pollution of all kinds; Decrease Of Flora And Fauna; Deforestation; and, the 3 'R's' - Reducing, Reusing And Recycling.

These workshops have been, and continue to be, delivered by Ulster University students (with support from the Research Assistant and other academic colleagues) and take place at the Belfast campus. Schools are required to enrol pupils on the yearlong project, with the expectation that each child will attend each session (12 three-day workshops, six each for groups from Primary KS2 & Post-Primary KS3) to 'complete' the environmental education programme to gain a certificate.

Another element of the Programme is a requirement for participants to engage in project activities beyond the workshops and keep a visual diary of their achievements. These projects encourage programme participants to really think about their transportation and eating habits, school and home energy use, and what they recycle and throw away.

At the end of the Programme, project participants will undertake a biodiversity nature hike together in a location, such as Cave Hill Country Park. This daylong event will allow pupils to mix outdoors, understand what biodiversity is and how natural systems coexist. Chaperoned by University students, the nature hike will allow the project to close in a fun, relaxing environment and participants will have a greater understanding of the natural assets on their doorstep.



Aim to develop a meaningful, purposeful and sustainable cross-community engagement for children and young people in Belfast





Action for Warm Homes

Northern Ireland

National Energy Action (NEA)

NEA is a charity working to end fuel poverty across the UK. Supported by Housing Executive funding, it also provides essential energy efficiency training and awareness outreach in Northern Ireland to householders and community groups. It raises public awareness through an extensive range of activities, including accredited training courses which cover fuel poverty, fuel debt, affordable warmth and delivering practical energy advice.

Fuel Poverty and Health Certified Training

In response to the pandemic, NEA continue to utilise technology as a means of delivering training programmes in respect of Fuel Poverty and Health awareness. This training examines the causes and impacts of fuel poverty with a focus on health issues and solutions. It aims to help delegates identify those likely to be at risk from fuel poverty and to signpost them towards appropriate assistance.

Webinars are delivered live by expert tutors to small groups to ensure a good level of interaction and support for learners.

The webinars are designed for anyone wanting to learn more about fuel poverty, its causes and links with physical and mental wellbeing.

Typical webinar Objectives and Content

Objectives:

- Explain causes of fuel poverty
- Identify health impacts of fuel poverty
- Explain causes of and remedies for condensation dampness
- Identify some of the assistance available to those at risk from fuel poverty

Content:

- Definition of fuel poverty in Northern Ireland and the causes of fuel poverty
- How to identify those at risk of fuel poverty using risk factors and triggers
- The health impacts of fuel poverty and damp homes
- Heat loss within the home
- The causes of condensation dampness/ mould and remedial actions that can be taken
- Assistance and sources of advice available to those struggling to heat their home adequately - including Grants and Schemes available in Northern Ireland.



**FUEL POVERTY
AWARENESS DAY**

2 DECEMBER 2022

Fuel Poverty Awareness Day 2 December 2022

During 2022, the Housing Executive continued to support our HECA partner National Energy Action, by using our social media platforms to promote the vital message about Fuel Poverty Awareness.

Staff from the Housing Executive's Sustainable Development Unit took part and pledged the Housing Executive's support for Fuel Poverty Awareness Day 2022.

"With the continued Cost of Living Crisis, the Housing Executive is focused on reducing Fuel Poverty in line with the Department for Communities Fuel Poverty Strategy".

HECA: Energy Efficiency Promotional Events

Energy Saving Week returned to Northern Ireland for its 22nd year on 17th October 2022. Delivered by Energy Saving Trust, an independent organisation dedicated to promoting energy efficiency, low carbon transport and sustainable energy use, the week helped householders across the country to reduce their bills, save money and reduce their carbon footprint.

Energy Saving Week is sponsored by The Housing Executive (Home Energy Conservation Authority) and also run in collaboration with Power NI, NEA NI, Bryson Energy, Consumer Council NI, Radius Housing, Clanmil Housing, Choice Housing, NIFHA, Phoenix Natural Gas, Firmus Energy and SSE Airtricity.

Energy Saving Trust provided a range of resources, challenges and toolkits to help encourage householders to take action. Primary schools across Northern Ireland were also encouraged to take part in an energy saving challenge between 3-31 October, to highlight the collective impact of saving energy and reducing carbon. Pupils and their families were tasked with making simple changes to help save energy at home. A record number of schools took part this year with Grange Primary School, Kilkeel winning first prize for the highest amount of CO₂ saved during the energy saving challenge. They were awarded £1,000 to spend on a sustainability-focused project or initiative, sponsored by Power NI (pro rata according to the number of pupils in the school) and five runners up received trees for planting in school grounds, sponsored by The Housing Executive.

Energy Saving Week Impact



176,125

reached out on
social media



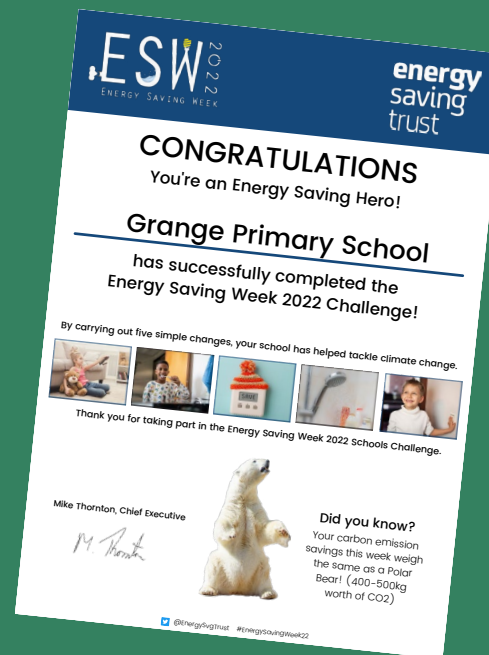
6,929

visits on the
website



25

primary school
entries



Love Your Home Show 17-19 June 2022

As the Home Energy Conservation Authority for Northern Ireland, Housing Executive staff joined some of HECA panel members to help provide free, impartial energy efficiency advice to members of the public at the first Love Your Home show since the start of the pandemic.

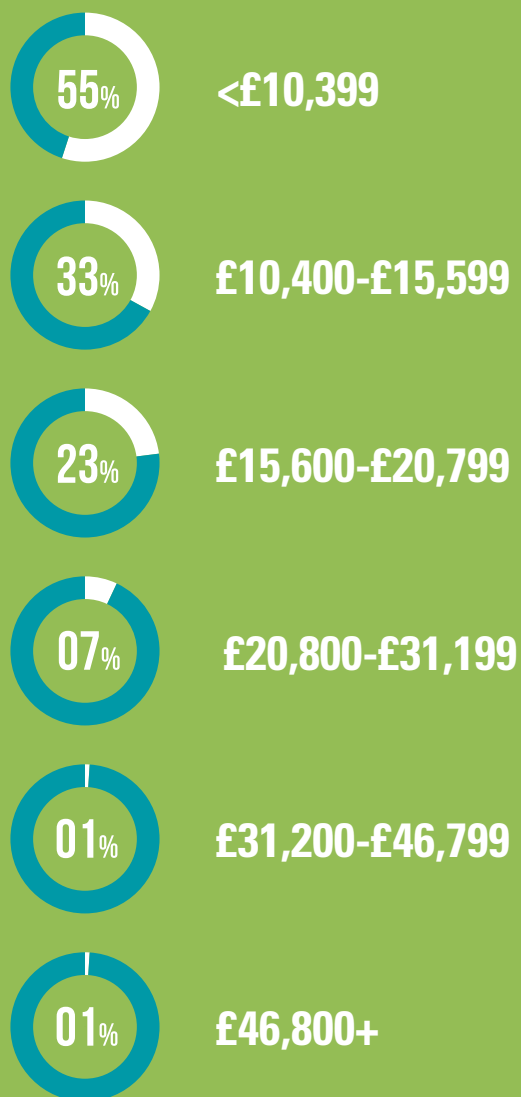


The background is a solid light green color. On the left side, there are two large, stylized letters 'B' and 'A' stacked vertically, rendered in a slightly darker shade of green. On the right side, there is a large, stylized teardrop shape, also in a slightly darker shade of green, pointing downwards. The text 'Reducing fuel poverty' is centered in the upper right area, overlaid on the teardrop shape.

Reducing fuel poverty

% In Fuel Poverty

(10% definition) against gross income



Source: HCS 2016

Fuel Poverty Data

The percentage of the Northern Ireland population living in fuel poverty rose by from 22% to 24% over the period 2016 to 2019, according to modelled estimates published by the Housing Executive in February.*

The change in fuel prices and household income values between 2016 and 2019 led to an increase in the number of households estimated to be in fuel poverty in 2019, from 160,000 households in 2016 to 179,000 households in 2019. The main contributing factor to the increase in fuel poverty was the rise in fuel prices. Although fuel oil prices decreased by 3% between 2016 and 2019, the average price of electricity and gas, increased by 18% and 29% respectively. On average, applying the fuel price changes alone from 2016 to 2019 increased the overall mean household fuel expenditure in Northern Ireland from £1,530 to £1,650 in 2019, the equivalent of an 8% increase. The increase in the average household income (1%) was not enough to offset the increase in household energy costs.

The modelling research found that without the ongoing installation of improvement measures such as cavity wall

insulation, loft insulation and heating system upgrades the estimated number of fuel poor households would be at 194,000 (26% of households).

A household is regarded as being in fuel poverty if they are unable to keep their home warm at a reasonable cost. In Northern Ireland, this is measured as any household that would have to spend more than 10% of their income on heating their home.

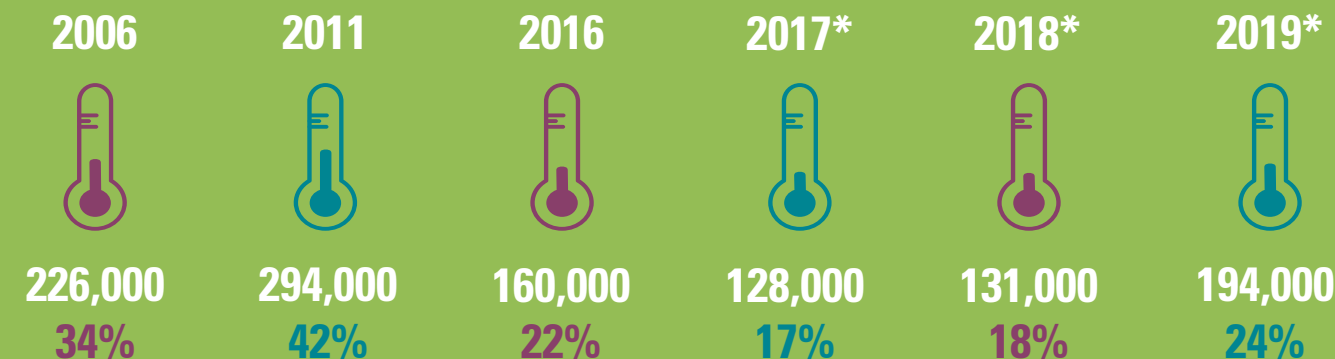
A key driver to deliver energy efficiency within refurbishment of housing in Northern Ireland is the need to help reduce fuel poverty.

Fuel Poverty Ready Reckoner

The Housing Executive recognises the need to gather fuel poverty data on a more frequent basis, rather than at the HCS 5-year cycle and, in 2018 published a Ready Reckoner to estimate the levels of fuel poverty based on the previous HCS (2016). This FP reckoner is available to the public - in raw form.

This provides fuel poverty figures based on variances in fuel prices, which is the most changeable factor of fuel poverty between the cycles of HCS.*

Households in Fuel Poverty (10% definition)* Estimated figures from 2016 HCS model



*<https://www.nihe.gov.uk/Documents/Research/HCS-2016-Additional-Reports/Estimates-of-fuel-poverty-in-Northern-Ireland-in-2.aspx>



ERDF/NIHE Funded Retrofit Project



The Housing Executive has embarked on a multi-million pound investment programme to improve the energy performance of almost 2,700 of its homes across Northern Ireland.

The Energy Efficiency in Social Housing project has been made possible by funding of c. €23 million secured from the European Regional Development Fund (ERDF) through its Investment for Growth and Jobs Programme for Northern Ireland 2014-2020. A further €22 million of funding is being invested by the Housing Executive.

This six-year €45 million programme is expected to be completed by September 2023. A number of schemes have already been completed or are currently onsite. The schemes include addressing the level of thermal efficiency in aluminium bungalows and 'No Fines' dwellings, through the provision of new external wall cladding, new double glazing, improved loft insulation and ventilation measures.

There are currently 20 schemes on site. However, due to delays during Covid and contractor issues, the target of home completions has been reduced to 1,597 properties by September 2023.

This scheme also won a National Inside Housing Development Award as 'Climate Change Retrofit Project of the Year 2022'

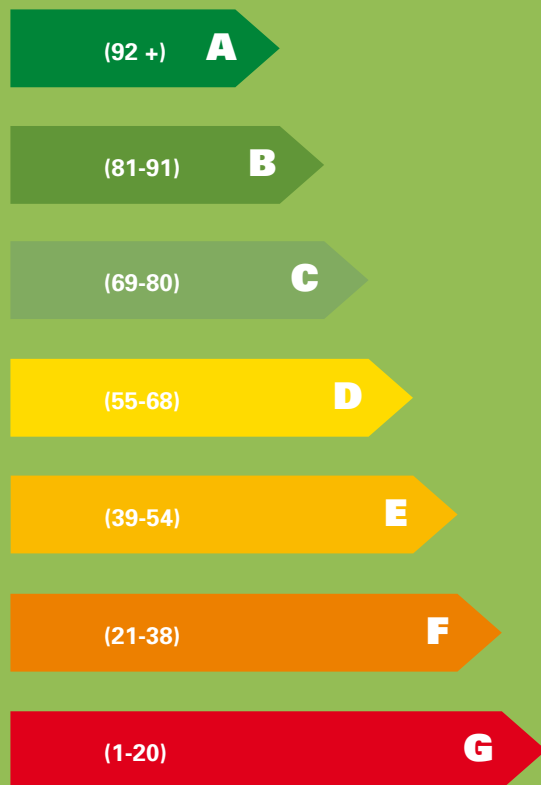


Two completed homes as part of our South Antrim Bungalow Scheme.

Two recently completed homes as part of our Cliftondene scheme



Rear of the homes in Cliftondene following the works (left) with before photos (right)



Grants for Owners and Private Rented Tenants

Affordable Warmth Scheme

The Affordable Warmth Scheme was introduced in September 2014. It replaced the Department for Communities' (DfC) previous Programme, the Warm Homes Scheme. The replacement Scheme is also funded by the DfC and is the Domestic Energy Efficiency Improvement Programme for vulnerable low income households. The Affordable Warmth Scheme is a central element in the NI Executive's Fuel Poverty Strategy.

The Housing Executive's Private Sector Improvement Services (PSIS) unit is active in the promotion of energy efficiency in its role as administrator of the Affordable Warmth Scheme, on behalf of DfC, in partnership with all 11 Councils in Northern Ireland.

Affordable Warmth is designed to help reduce the effects of fuel poverty in the private sector, offering a range of measures for households with a gross annual income of less than £23,000. The Housing Executive works with Department for Communities, local Councils and the Ulster University, to ensure that assistance is targeted in areas where fuel poverty is prevalent. In 2021/22, The Affordable Warmth Scheme facilitated improvements in 2,841 homes at a cost of approximately £11.8m.

This in turn involved the installation of 4,585 measures in these properties, as shown below:



2,092

boiler installations



£1.3m

expenditure via the Boiler Replacement Scheme

Boiler Replacement Scheme

The Boiler Replacement Scheme is for owner occupiers whose annual total gross income is less than £40,000 and is designed to provide assistance to help with the cost of replacing outdated oil or gas boilers. In order to be eligible for replacement, the current boilers must be at least 15 years old. A grant of up to £1,000 is available to assist with the cost of installing new boilers and controls.

Householders may also wish to convert from oil to gas or to a wood pellet boiler.

In 2021/22, a total of 2,092 boilers were installed at a cost of £1.3m



395

loft insulation



2,175

heating



1,114

windows



320

cavity wall insulation



39

draught-proofing measures

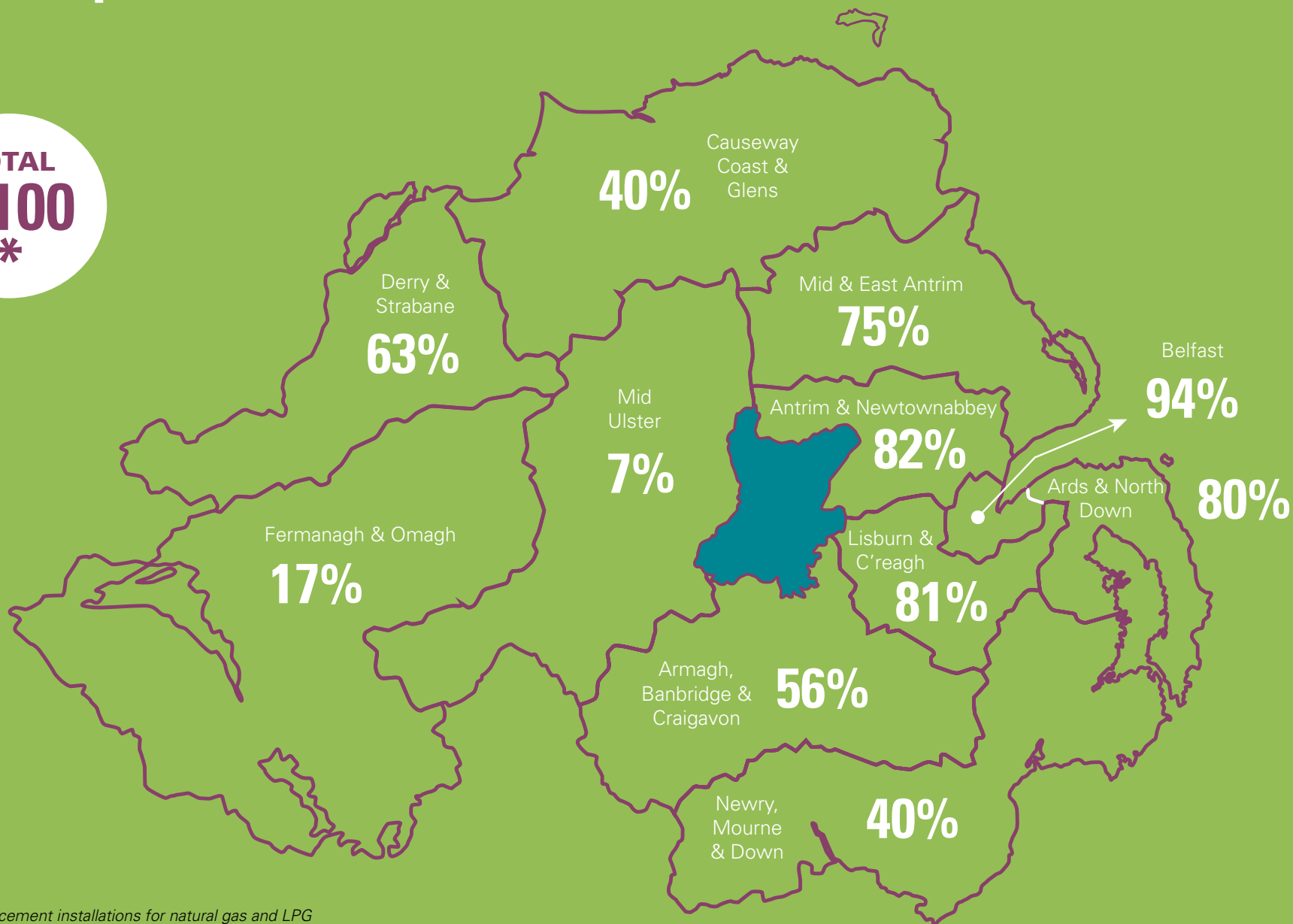


2

solid wall insulations

Proportion of gas installations by Council Area within Boiler Replacement Scheme 2021/22

TOTAL
2,100
*



*Figure reflects boiler replacement installations for natural gas and LPG



Energy Efficiency refurbishment across the Housing Association movement

During 2021/22, the Housing Association movement invested over £5m installing the energy efficiency measures including:



1,500+

high efficiency boilers



403

loft insulation and draught proofing measures



NI Sustainable Energy Programme (NISEP)

The NI Sustainable Energy Programme (NISEP) is a customer funded Programme, which provides energy efficiency measures to homeowners, private tenants and housing association properties. The NISEP fund comes from a levy on electricity bills paid by both domestic and commercial customers throughout Northern Ireland and 80% of funding is ring-fenced for vulnerable customers.

Householder eligibility is based on gross annual income bands.

The NISEP, which runs on a year-by-year financial basis, has been successful in targeting homes with no heating or inefficient heating systems in addition to installing energy saving measures in homes such as loft insulation, cavity wall insulation, smart heating controls and draught proofing measures.

NISEP funded £7.6 million of investment in energy efficiency Domestic schemes in 2021/22 which included domestic Air Source Heat Pumps and solid wall insulation, delivered as part of a whole house solution package.

The Utility Regulator has announced that the current Programme is now open until March 2025 with the final two years managed under one bidding round in 2023/24.

The Energy Saving Trust is the Programme Administrator of NISEP on behalf of Northern Ireland's Utility Regulator, and schemes are delivered by a range of organisations across NI.

Domestic measures installed via NISEP during 2021/22



1,747

loft insulation measures



1,925

cavity wall insulation



1,317*

heating systems
(inc 9 ASHP)

Housing Executive Energy Efficiency measures within Planned Maintenance Works

In 2021/22, the Housing Executive invested approximately £34 million in energy efficiency measures within its planned maintenance programme across its own housing stock.



£4.3m on 2,007

double glazing installations
(providing A-rated double glazed units)



£18.4m on 3,960

heating conversions (energy efficient boilers) which includes zoning where practical and 270mm loft insulation



Cavity Wall Insulation Research Project

In Following consultation on the draft Cavity Wall Insulation Action Plan, for its stock in response to British Board of Agreement's findings and recommendations, the Housing Executive launched its CWI Action Plan which was published in March 2022.

The Housing Executive will deliver a small annual programme aimed

at addressing instances where the condition of cavity wall insulation is having a detrimental impact on the structure of a dwelling. Unfortunately, the funding to deliver the full plan is not currently available under our current rental income arrangements and we will require a new Housing Executive Revitalisation programme to provide a sustainable solution to fund all of the stock investment needs.

Housing Executive Demonstration Pathfinder Pilots

Rural-Led Energy Transition (RULET)

RULET is an initiative within the SPIRE 2 EU funded project aimed at reducing or eliminating the risk of low-income households being left behind in the transition to clean, smart, integrated energy systems.

Domestic electrical heating systems, when combined with energy storage and smart controls and operated at scale, have the potential to create significant system value by managing high levels of wind penetration. Northern Ireland has world-leading levels of wind energy; however, when wind generation exceeds electricity demand, the output from wind turbines is dispatched down - 'turned off'. In 2020, 15% of available wind with a retail value of over £80m, was dispatched down.

Led by Ulster University and the Northern Ireland Housing Executive, RULET builds on the work of the HANDIHEAT project, which tested low carbon heating and improved thermal performance.

RULET is focused on making the full benefits of smart energy technology available to the most vulnerable households in the western counties of Northern Ireland, a wind energy hotspot. Other partners include Utility Regulator, NIE Networks, Energia/PowerNI, manufacturers Grant & Sunamp, and smart heating control developer Climote.

The project installed the equipment in November and December 2021 to test the deployment of:

- a) Improved energy efficiency measures
- b) Low carbon heating systems focused on electrification
- c) Tariff change, initially focused on time of use tariffs
- d) Education and empowerment of householders to enhance behaviour change



Raymond McAleer, from Omagh, said his standalone heat pump installed through the RULET project means he uses less energy

Going forward the Housing Executive will utilise the key learning points from the HANDIHEAT and RULET pilots as well as evidence from other pilots which the Housing Executive support, such as GIRONA1 to scope out a low carbon programme of 300+ houses over 2023-2025 to provide evidence for a future decarbonised heating policy.



Social Housing Development Programme

The Social Housing Development Programme delivered 1,626 completed homes in 2020/21 (against a target of 1,500). 67% of these completions (1,088) were newly constructed units.

New build homes are constructed by housing associations in compliance with current Building Regulations, which produce an average SAP rating of approximately 83 (Band B).

This level of SAP rating is a contributing factor for the higher mean SAP of 72.63 for social housing in comparison to the mean SAP of 65.11 across all tenures of occupied dwellings.

Energy Efficiency Multiplier

The DfC Housing Association Guide offers an optional Energy Efficiency Multiplier (EEM) that supports sustainable and energy efficient design for new build homes delivered via the Social Housing Development Programme. The EEM can be claimed by housing associations providing the properties are constructed to SAP Band 'A' (92-100) and a minimum Fabric Energy Efficiency Standard (FEES) of 39 kWh/m²/year for apartment blocks and mid-terrace homes, or 46 kWh/m²/year for end terrace, semi-detached and detached homes. This approach offers benefits both for householders and the environment by providing fabric first solutions and minimising the need for additional mechanical fittings within newly constructed dwellings. The level of the EEM available for housing associations was reviewed further in 2022 following the changes to Building Regulations that took effect on 30th June 2022.

Providing support to housing associations to deliver higher standards in energy efficiency for new social homes is viewed by DfC and the Housing Executive as a vital way of mitigating the effects of climate change, reducing fuel poverty and improving health.

DfC is engaged in on-going consultation with the Northern Ireland Federation of Housing Associations and directly with housing associations regarding the potential to include the minimum SAP/FEES levels outlined above as a base standard for all new social housing. A review is also on going regarding the potential to provide support for other optional enhanced standards, including Passivhaus. The Housing Executive is also aware that some housing associations are investigating small-scale pilot proposals for delivering new social homes to 'Nearly Zero-Energy Buildings' standards, and information from these pilots will also be shared with DfC in due course.

The background is a solid teal color. On the left side, there is a large, stylized, lowercase letter 'a' in a slightly darker shade of teal. In the bottom right corner, there is a graphic of a sun with rays and a cloud, also in the same darker teal shade. The text is positioned in the upper right area, overlapping the 'a' and the sun/cloud graphic.

**Living
sustainably -
protecting the
environment**



Education and Empowerment leading to behaviour change

As part of our Sustainable Development Strategy & Action Plan, the Housing Executive acknowledge that education & empowerment is a key driver to enable societal transformation and behaviour change so that householders understand how to take advantage of new sustainable technologies and solutions.

Why is this important?

The Climate Change Committee (CCC), in its 2021 progress report to Parliament (June 2021), considered the impact of behaviour change on UK emissions. The report found that people and public engagement are key enablers for achieving the UK's Net Zero target. Earlier findings concluded that societal and behaviour changes are required in 62% of actions put forward to meet the UK's net zero greenhouse gas targets. This is compared to just 38% of actions which involved low-carbon technologies or fuels alone. (Source: The role of energy in meeting the UK's net-zero greenhouse gas targets, Climate Change Committee).

How will the Housing Executive educate and empower their staff, tenants and local communities

1. Local Offices Energy Awareness and Carbon Literacy training for staff and community groups - Green Champions
2. HOMEADVICE (evolution of the previous HEATSMART service)
3. Support for tenants with persistent heating issues and modern heating controls
4. Electronic Vehicle Charging Points
5. Rewilding in collaboration with Community Groups



Housing Executive Landlord Energy Efficiency Strategy

The purpose of the Housing Executive's Energy Efficiency Strategy for its existing homes is to minimise tenants' heating bills, fuel poverty, and carbon emissions.

The new NI Climate Change Act has much more demanding ambitions for reductions in climate changing gases than previously, so we must gather more data to plan for large retrofitting programmes and for more use of low carbon heating systems, especially electric heat pumps. In particular we will gather the data collected during Energy Performance Certificate surveys.

To cut carbon faster we hope to gather data on which house types are using most energy, to know which should receive low carbon systems first. We also want to test which homes are already well enough insulated to have electric heat pumps installed. We also want to know more about how persistently high fuel prices may lead homes to stay cold or damp, and will consider the use of systems that enable tenants to monitor and manage energy expenditure and ventilation to keep homes both warm and dry.

We will make final choices about new heating or solar energy systems when NI government energy policies on Smart metering for electricity and tariffs are clearer, but our 'No Regrets' policy is generally 'Fabric First', which turns solar energy coming in via windows and electricity used into useful temperature improvements.





Aim: Reduce energy demand, principally through a fabric first approach to reduce fuel poverty and deliver net zero heating in order to reduce carbon emissions in line with the national target of Net Zero



195%

average improvement
on pre-retrofit SAP
scores



20.3°

average post retrofit
temperature (3.4°
increase on pre retrofit)



£748

average
reduction in
fuel bills



45.3%

average
decrease in total
fabric heat loss



75.5%

average
reduction on CO₂
emissions rate



Award Winning JOURNEY TO RETROFIT - Pilot Scheme, Newry

Three prestigious inaugural awards have been presented to the Housing Executive for this ground-breaking net zero carbon project that's now driving the organisation's strategy to upgrade homes across Northern Ireland.

In January 2022, the Newry-based project scooped the National Housing Maintenance Forum (NHMF) award for Best Net Zero Carbon Initiative, recognising the innovative approach being developed to provide better insulated homes with lower carbon emissions.

It also received the Best Small Retrofit Project of the Year award from the Retrofit Academy at the Futurebuild 2022 conference in London.

Thirdly, the team was presented with the Sustainability Project of the Year award by Architect and TV presenter George Clarke at the AICOIHomeLINK Community Awards 2022.

Housing Executive Head of Quality Improvement Adrian Blythe said: "We are delighted to receive these important awards which recognises the hard work, foresight and dedication of so many people. We would also like to thank our tenants in Newry who allowed us into their homes to install and monitor some of the latest energy-saving techniques. This work will undoubtedly help us build a better environment for everyone."

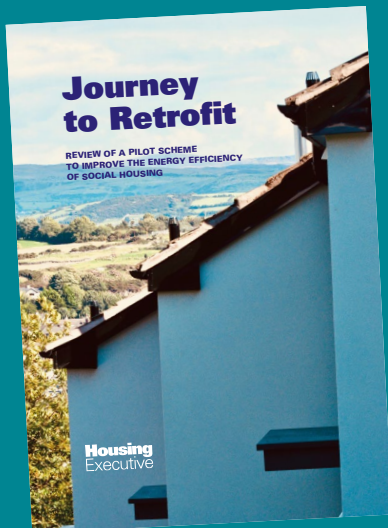
A new report on the award-winning scheme, Journey to Retrofit, has also been released by the Housing Executive.

Architect and Technical Development Manager Caroline Best said: "The purpose of the pilot was to understand the benefits and challenges of implementing various retrofit measures, which would then inform the strategy for future retrofit schemes on a much larger scale. The report is an in-depth look at the pilot scheme to improve five terrace houses in Newry to different energy efficiency standards. It describes the process from its very early, ambitious beginnings, to the detailed and target-driven approach finally delivered.

Measures included external wall insulation, loft insulation, gas boilers, heating controls, new windows and doors, an airtightness strategy and innovative ventilation systems.

Completed in 2018, the scheme was followed by a two year evaluation process to assess the impact on tenants' fuel bills and comfort levels. Detailed research was also carried out to look at the social and economic impact of the energy upgrades.

The knowledge gained through the pilot scheme has provided a solid base upon which the Housing Executive is building its retrofit strategy and responding to the challenges of the decade ahead. In recent months the Housing Executive has hosted a visit to the project with members of NIHFA, and further visits are planned in the with Chartered Institute of Housing as the Housing Executive continues to share learning and experience across the social housing sector.





HEATER

Following on from the success of the HANDIHEAT Project, the HEATER Clustering project (Heat and Energy Empowerment and Education in Rural Areas) was launched in 2021 and led by the Housing Executive under the EU Interreg Northern Periphery and Arctic Programme (NPA). This brought together a consortium of five separate projects, with

complimentary themes and synergies in the field of energy efficiency in northern territories.

In its 12 months duration, the HEATER project merged the following projects: HANDIHEAT (led by the Northern Ireland Housing Executive), SMARTrenew (led by LYIT), e-Lighthouse (led by Oulu University of Applied Sciences) and SENDdoc and TechSolns (both led by Ulster University), which all addressed similar themes and territorial challenges within the field of energy efficiency.

By combining existing key resources and networks with established partners across LYIT, University of Ulster and Oulu University of Applied Sciences in Finland, the HEATER project aimed to build greater social sustainability and energy stability within rural communities who are more vulnerable to the risk of energy poverty and inequality. Through their respective projects, partners combined their expertise, resources and outputs from previous projects, bringing together a wider stakeholder base, to inform decision and policy makers in respective regions across the NPA.

In 2022 the project held a thematic series of energy webinars aimed to inform, educate and empower rural communities, householders, policy makers and stakeholders on key issues, technological advances and the potential energy solutions available to them.

These webinars* featured guest speakers from across the NPA region including, Finland, ROI and Denmark from sectors including Academia, Energy, Infrastructure, Health, Housing and Sustainable Development.

[*HEATER - 'Heat Solutions in Rural Areas'. 09.02.2022 - YouTube](#)

[HEATER Webinar 2 - Energy Monitoring for Sustainable Communities - YouTube](#)

[HEATER Webinar 3 - 'Energy Education for Behavioural Change and Sustainability' 31.05.2022 - YouTube](#)

HEATER is a cluster of projects with common synergies



HEATER Final Conference

The final HEATER conference took place in June 2022 in Oulu, Finland. This was a hybrid online/physical event hosted by Oulu University of Applied Sciences, attended in person by HEATER Project staff from the Housing Executive as well as Oulu University partners, students, lecturers and academic professionals.

The achievements of educating and empowering communities in remote and sparsely populated communities across the NPA region to increase the use of energy efficiency in housing and public infrastructure was highlighted through contributions from Project Partners. After the closing conference Housing Executive staff were given a tour of the state of the art 'Hybrid Energy Laboratory' at the Oulu University Campus by Project Manager Jyri-Jussi Torvinen which utilises Solar and District Heating energy systems.

The conference can be viewed at:

[HEATER Project Final Conference - YouTube](#)



Energy Efficiency activity within the Housing Association Sector

Good housing design has a key role in meeting the aspiration of delivering sustainable communities and protecting our environment, stimulating economic growth, maximising wellbeing and achieving social inclusion. Local housing associations play a central role in the construction of high quality, energy efficient new homes throughout Northern Ireland.



Apex Housing Association

Apex is a major housing association managing a stock of some 5,449 homes (general needs), which will grow to over 5,749 for the year 2021-22.

Energy efficiency upgrades

Energy efficiency upgrades A total of 350 energy efficient condensing boilers were installed in homes across Derry/Londonderry, Tyrone and Fermanagh throughout the year. 267 of these conversions were oil to natural gas and a further 83 upgrades were to high-efficiency oil boilers. These upgrades will improve thermal comfort, keep homes warmer for longer and help tenants reduce their heating costs.

Apex are investing a further £1m from January 2023 to deliver gas conversions and oil boiler upgrades to an additional 150 homes in Derry~Londonderry, Strabane, Omagh, Coleraine, and County Tyrone.



Arbour Housing Association

Arbour Housing, the new name for South Ulster Housing, own and manage over 1,200 home throughout Northern Ireland with larger concentrations of stock in the main towns of Portadown, Lurgan and Newry.

Arbour continue to help their tenants live sustainably and reduce their fuel bills & ease fuel poverty.



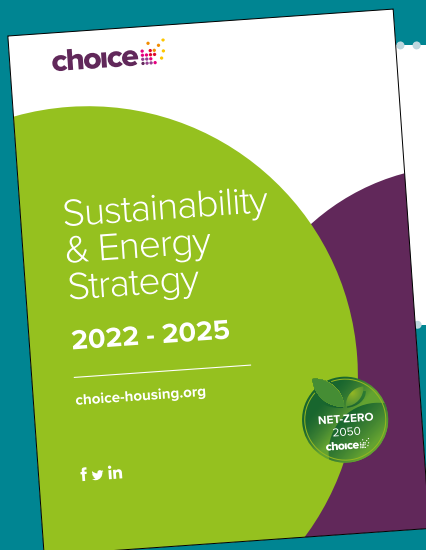
connswater

Connswater Homes

Connswater have completed and allocated the 49 new homes at Milewater Drive, New Mossley (pictured below).

These homes are now completed and tenants are benefitting from the photovoltaic panels.





Prioritisation of energy efficiency and Carbon reduction measures:

Fabric First

(improving insulation of walls, roofs and floors to reduce heat demand)

Efficient Energy Systems

(installing efficient heating and power systems)

Low or Zero Carbon Technologies

(low/zero Carbon heat and onsite energy generation via renewables?)



Choice Housing Ireland Ltd

Choice is one of the largest independent housing associations in Northern Ireland providing high quality homes and care and support services to help meet the diverse needs of a wide range of customers, including older people, families, mature singles and people with complex needs.

Choice understands that energy cost is a concern for tenants and have put various measures in place to ensure that the homes they provide are some of the most energy efficient in the country

During 2019-2021, Choice Housing achieved the following energy and sustainability goals:

- 10.6% reduction in their annual Scope 1&2 CO₂ emissions
- Invested £2.49m in energy efficiency & Carbon Reduction
- Generated over 1 million kWh of renewable electricity
- Built 97% of new homes to an EPC A or B Standard

Choice Housing launched their Energy and Sustainability Strategy 2022-25* in October 2022. The outcomes of the Strategy include:

- Achieve Net Zero by 2050
- Increased awareness of Sustainable behaviours
- Develop a 1.5C Greenhouse Gas reduction Pathway to 2030
- Visibility of the environmental impacts across property lifecycles

**<https://www.choice-housing.org/media/5344/energy-and-sustainability-strategy-22-25.pdf>*

In 2020 Choice Housing and the Housing Executive partnered with The Electric Storage Company (TESC) on an innovation initiative in Coleraine called 'Project Girona'. This project focused on demonstrating the important role that battery storage can have in making the most of affordable renewable energy from solar PV amongst social housing.

In 2021 The Electric Storage Company (TESC) installed battery storage solutions supported by solar PV technology into six NIHE and four of Choice's properties. This system aims to make better use of the electricity generated from solar panels during the day so that it can be used when the tenant needs it.

As an example, if the user is working during the day and is not at home to use the power generated by their solar panels, this electricity is typically exported to the grid at a small rate (6-8p/kWh). Then when the user returns home they need to pay a higher rate to purchase electricity from the grid when they need it in the evening and the solar panels are no longer generating. From January to June 2022 the average unit rate for electricity in Northern Ireland was 22p/kWh according to the Utility Regulator.

Where TESC have installed their battery systems, the tenants can use electricity generated and stored during the day at the time that they need it. This reduces their energy bills and reduces their risk of fuel poverty. Likewise the electricity generated is Carbon free which reduces the tenants Carbon footprint.

In 2022 Choice tenants that had a solar PV system with battery:

1. Saved an average of £440 on their electricity bills.
2. This is a 55% reduction on average compared to using grid electricity.
3. Reduced their Carbon footprint by 424kg of CO₂.
4. The emissions prevented is equivalent to 1,600 miles driven in a medium sized car.

**Reductions stated are calculated at Utility Regulator average unit rate of £0.22/kWh for Jan-June 2022.*

**Carbon figures based on the UK government's GHG inventory.*



Clanmil Housing

Choice is one of the largest independent housing associations in Northern Ireland providing high quality homes and care and support services to help meet the diverse needs of a wide range of customers, including older people, families, mature singles and people with complex needs.

Clanmil's commitment to providing homes that are energy efficient, sustainable and comfortable for tenants is demonstrated by the appointment of an Energy and Environmental Officer. Clanmil is only the second Housing Association in Northern Ireland to do so.

Energy upgrades (existing stock): As part of Clanmil's annual planned maintenance programme to upgrade our lower performing homes (SAP rating E,F&G) to a higher standard, Clanmil carried out heating and insulation upgrades to 24 homes. This included oil to gas conversions, old Economy7 to energy efficient quantum heaters, loft insulation, cavity wall insulation and low energy lighting.

Through response maintenance, Clanmil replaced and installed 164 new boilers including:

- 120 gas to gas boilers
- 22 oil to oil boilers
- 1 Air Source Heat Pump with 1 ASHP
- 4 oil to gas boilers
- 1 old Economy 7 boiler to oil
- 16 Old Economy 7 boilers to Quantum heaters

Photovoltaic panels (PV): Clanmil made an investment of £280,000 in 2015 and installed PV panels at 12 housing schemes totalling 221kW. To date, the panels have generated 871,000 kwh and this has reduced Clanmil's impact on the environment by 295T CO₂.

For the year 2020/21 the 12 PV systems generated 180,000Kwh and reduced Clanmil's carbon emissions by 61T CO₂. Based on 2020/21 electricity prices, this also saved £27,000 on purchased electricity.

Looking ahead

Clanmil aims to introduce more renewable technologies across the organisation where feasible, as well as continuing other measures such as heating, lighting and insulation upgrades to our existing homes. This will reduce energy costs for tenants and help eliminate fuel poverty. This is also a step forward to achieving Clanmil's target to reduce carbon emissions by 10% by 2026 in line with our Environmental Strategy 2021/26.

The Environmental Strategy has four main objectives, which are:

- To ensure Effective Energy Management.
- To deliver more Sustainable Homes.
- To deliver Positive Environmental Management.
- To raise Environmental Awareness.



**To have a more
equal society**





Ways that Housing Executive tenants save money and reduce fuel poverty

The Making Your Money Work Service is delivered by frontline staff and aims to assist tenants to improve their financial wellbeing through provision of:

- Advice and assistance with simple household budgeting and benefit entitlement. This element of the service has recently been enhanced with the introduction of the Benefits & Budgeting Calculator which allows staff to help tenants to check they are in receipt of the correct benefits for their circumstances and to manage their household income effectively.
- Referral for independent specialist advice for tenants with serious or complex debt issues.
- Referral for floating support services for tenants with perceived vulnerabilities.
- Provision of advice and assistance with the Department for Communities "Make the Call" service.

Phase 2 of the Making Your Money Work service is currently under development to further enhance the service through the provision of advice and assistance with regard to bank account options, credit unions, energy suppliers, media packages and employment opportunities.

The Housing Executive's Financial Inclusion Managers

Over the course of 2022, the Housing Executive expanded its Financial Inclusion Team. There are now a total of seven Financial Inclusion Managers and three Deputy Financial Inclusion Managers working within the Housing Executive.

The team works with our tenants to provide in-depth benefits and money advice. Niamh (South Region), Michael (North Region), Sinead (Belfast Region), and Donna (floating) are here to:

- Carry out benefit checks, and help tenants to resolve complex benefits issues;
- Help with household budgeting;
- Provide impartial advice to help reduce any debts and ensure tenants can make the most of their household income;
- Help tenants to access other services to help alleviate immediate financial hardship (e.g. charitable organisations, grants etc.);
- Support frontline staff in delivery of the Making Your Money Work service.

Together, the team assist an average of 215 tenants per month (over 3000 tenants in 2022), to improve their financial wellbeing. Throughout 2022, the Financial Inclusion Managers identified over £1.4 million in extra benefit income for Housing Executive tenants (and nearly £200,000 for Housing Applicants).

A Just Transition to provide a secure sustainable energy mix

The Housing Executive believes one of the greatest challenges is to ensure the energy transition does not deepen pre-existing social inequalities. The economic burden of the transition should be weighted towards the most polluting industries and manufacturers, not consumers.

To ensure a just transition, measures to accelerate a green energy transition should also:

- support jobs and growth of jobs that are environmentally and socially sustainably
- create work that is high value, fair and sustainable
- reduce inequality as far as possible
- help reduce poverty and derivations of poverty such as fuel poverty

The Housing Executive is committed to improving the lives of householders through its ongoing thermal improvement programmes and a 'just transition' is embedded into the Sustainable Development Strategy, which was launched in 2022.



Phoenix Natural Gas

transformed the local home heating market when it was established to bring natural gas to Northern Ireland for the first time in 1996. Now as the owner and operator of the largest natural gas distribution network locally, Phoenix Natural Gas is responsible for the safe and secure supply of natural gas to its 235,000 customers already connected to its 3,850km pipeline network. The company continues to grow its customer base by around c.6000 new connections per annum* and has further extended its network into a number of new areas including East Down and Whitehead.

Having played a crucial role in the delivery of lower carbon fuel choice for consumers, Phoenix Natural Gas continues to play an instrumental role in the development of the NI Gas Industry's Roadmap to net carbon zero and demonstrating the potential for the continued utilisation of the existing gas network to deliver renewable gas solutions, such as hydrogen and bio methane, directly to consumers homes and businesses, supporting society's progress to a net carbon zero future.

**January – December 2022*



SGN Natural Gas (Scottish Gas Network)

An exciting period awaits for SGN Natural Gas as the organisation prepare to become a world leader in decarbonisation. As Northern Ireland's newest gas network, their state-of-the-art infrastructure is already set up to receive 100% biomethane, putting SGN at the forefront of the energy transition.

SGN are planning for the injection of biomethane as early as 2023/24 in Dungannon, one of their main network towns. Once fed through the gas grid, this green energy source can be used for heating, cooking and a variety of industrial purposes as an alternative to natural gas.

Further plans are already underway to bring more biomethane producers on board and, with the accommodation of green hydrogen further down the line, SGN have a plan in place to decarbonise their entire gas network by 2050. As an agriculturally rich area, they have the opportunity to take advantage of their renewable gas production potential to not only become energy self-sufficient, but also a significant energy exporter in the long term.

Meanwhile, SGN Natural Gas continues to develop the natural gas network in counties Derry/Londonderry, Tyrone and Fermanagh, where oil and solid fuel use remains prevalent. They are on target to exceed 3,000 connections by the end of 2022, giving a great platform heading 2023.



Firmus Energy

currently has natural gas available to over 185,000 homes and businesses throughout its network area, which stretches from Newry through the central corridor in NI to Derry-Londonderry. Firmus continue to connect over 5,000 homes and businesses each year. The Firmus network, and indeed all of the natural gas networks in NI, are suitable to transport bio methane and hydrogen which means that the natural gas industry is in a great position to transition to net zero carbon. Existing boilers can accept bio methane and a 20% blend of hydrogen so every new connection can facilitate renewable gas when it becomes available.

Utility Regulator

The Utility Regulator's Corporate Strategy 2019-24 is focused on enabling a low carbon future for Northern Ireland. To date, the Utility Regulator has approved investment in low carbon energy technology and played a part in helping Northern Ireland meet its commitments on energy generation from renewable sources. The Utility Regulator carries electricity and gas network price control reviews that facilitate millions of pounds of investment in these networks to help achieve decarbonisation.

Energy markets in Northern Ireland continue to be affected by volatility in international wholesale fuel costs felt across the world. These rising costs have been the driver for a series of increases in electricity and gas bills.

The Utility Regulator continues to work with the Department of Communities, Department for the Economy, Consumer Council and other key partners to help identify any measures that can be brought forward to help consumers. Additionally, if wholesale prices begin to reduce, their system of regulation in Northern Ireland allows them to act to make sure that reductions are fully passed on to consumers as quickly as possible.

NI Consumer Council



72,569

consumers used the Consumer Council's domestic energy cost comparison tool (Electricity and Gas)



32,738

viewed the home heating oil price checker



31,787

people compared energy prices on the main Consumer Council website to identify potential energy savings

Measuring energy efficiency investment

During 2021/22, the Housing Executive invested approximately £36.04m in order to improve thermal efficiency, influence and increase strategic action to tackle fuel poverty and improve access to energy efficiency measures and advice across Northern Ireland working with the Department for Communities.

Our indicators show the impact of COVID lockdown over most of the year had a negative impact on the availability of most of the funding providers to deliver the programme aspirations.

2021/22 Energy Efficiency Investment via the Housing Executive

	£
Housing Executive Heating Schemes	18,439,745
Housing Executive Double Glazing	4,331,127
External Thermal Improvements	70,000
DfC Affordable Warmth	11,800,000
DfC Boiler Replacement	1,300,000
Energy Marketing including, NI Energy Advice Service marketing.	59,000
Fund NEA	45,000
TOTAL	£36,044,872

Above does not include the NI Sustainable Energy Programme of £7.9 million for energy efficiency schemes and Housing Association energy efficiency measures of £5.5m

Measuring Our Outcomes



Outcomes: Improving People's Homes and Helping to Transform their Lives

Area of Activity	Position at the end of 2020/21	Indicators	Action	Progress during 2021/22
Improving Domestic Energy Efficiency	The work on the NI House Condition Survey (HCS) is still ongoing but publication has been delayed until 2022/23 financial year. The ongoing pandemic and the increased sample size has meant that it has been pushed back.	Initiatives/ Measures to improve energy efficiency	Evaluate/ Review data	The work for the NI HCS is still ongoing but publication has been delayed until 2022/23 financial year. The ongoing pandemic and the increased sample size has meant that it has been pushed back.
	<p>Housing Executive staff promoted and engaged in various virtual events during 2021.</p> <p>Housing Executive participated virtually in the National Energy Action (NEA) UK-wide Fuel Poverty Awareness Day 3rd December 2021</p> <p>The Northern Ireland Energy Advice Service continues to provide advice to households via 0800 111 4455 and the get-in-touch on NIHE website</p> <p>The Housing Executive entered into a partnership with Keep Northern Ireland Beautiful to deliver our schools energy efficiency awareness programme (SEEAP)</p>	Improved access to energy efficiency advice (number of customers)	Market the energy efficiency message	<p>Housing Executive staff promoted and engaged in various events, both virtual and in-person throughout 2022</p> <p>Housing Executive participated in the National Energy Action (NEA) UK-wide Fuel Poverty Awareness Day 2nd December 2022</p> <p>The Northern Ireland Energy Advice Service continues to provide advice to households via 0800 111 4455 and the get-in-touch on NIHE website, with over 5,000 queries in 2021/22.</p> <p>The Housing Executive has continued its partnership with Keep Northern Ireland Beautiful to deliver our schools energy efficiency awareness programme (SEEAP)</p>



Outcomes: Improving People's Homes and Helping to Transform their Lives

Area of Activity	Position at the end of 2020/21	Indicators	Action	Progress during 2021/22
Reducing Fuel Poverty	1,773 boilers installed through the Boiler Replacement Scheme with £1.2m investment Affordable Warmth Scheme expenditure £6.67m NISEP contributed funding of almost £7.99m towards the installation of energy efficient heating systems and insulation measures.	Measured within NI House Condition Survey Increase of affordable warmth for disadvantaged energy consumers (NI Housing Condition Survey Fuel Poverty average)	Provide fuel purchasing opportunities for low income families	2,092 boilers installed through the Boiler Replacement Scheme with £1.3m investment Affordable Warmth Scheme expenditure £11.8m NISEP contributed funding of almost £7.5m towards the installation of energy efficient heating systems and insulation measures.
	The refreshed Oil Buying Club service has been up and running from September 2021 with membership increasing month on month.	Implement energy efficiency schemes within social and private housing sectors	Provide fuel purchasing opportunities for low income families	The Oil Buying Club service continues to grow its membership & help people save money on their oil, with 1.95m litres of oil brokered.
	2,574 Affordable Warmth Measures in 1,599 homes.	Increase of affordable warmth for disadvantaged energy consumers (NI Housing Condition Survey Fuel Poverty average)	Implement energy efficiency schemes within social and private housing sectors	4,585 Affordable Warmth Measures in 2,841 homes.



Outcomes: Improving People's Homes and Helping to Transform their Lives

Area of Activity	Position at the end of 2020/2021	Indicators	Action	Progress during 2021/22
Living Sustainably - Protecting the Environment	The ERDF retrofit project is due for completion in 2023. Due to the pandemic, 1,900 properties will be completed by September 2023. Following consultation on the draft Cavity Wall Insulation Action Plan, for its stock in response to British Board of Agreement's findings and recommendations, the Housing Executive has now finalised the CWI Action Plan that will soon be published.	Increased innovation in sustainable energy efficiency	Research and install innovative measures to create more efficient homes	A reduced target (due to Covid) means that a total of 1,597 properties will be completed by September 2023. The Cavity Wall Insulation Action Plan was launched in March 2022.
	In September 2021 HANDIHEAT held its final conference in Belfast as a means of drawing the project to its formal conclusion. This was a virtual event given the COVID-19 restrictions, with EU partners presenting online from their respective NPA regions. HANDIHEAT was granted a three month project extension due to the disruption of the pandemic, and as a result the project will officially end in December 2021, with final reports being submitted by April 2022. Housing Executive gained Platinum in the Business in the Community Environmental Benchmarking Survey 2021 ISO 14001:2015 Environmental Accreditation was awarded to the Housing Centre and DLO Offices in Portadown	Increased innovation in sustainable energy efficiency	Seek to increase electricity consumption from renewable resources	In 2022 the Housing Executive, as Lead Partner, delivered the HEATER Final Conference, via live streaming from Finland. Housing Executive retained Platinum in the Business in the Community Environmental Benchmarking Survey 2022. ISO 14001:2015 Environmental Accreditation was awarded to the Housing Centre and DLO Offices in Portadown.

Outcomes: Improving People's Homes and Helping to Transform their Lives

Area of Activity	Position at the end of 2020/21	Indicators	Action	Progress during 2021/22
To have a More Equal Society	New natural gas connections. Phoenix 8,000 SGN 900 Firmus 6,000	Reduction from 68% household reliant on oil based heating systems (HCS)	Provide measures to secure energy mix	New natural gas connections. Phoenix Natural Gas c.6000 SGN c.3,000 (total connections made) Firmus 5,000

Conclusion

The pressures on householders continue with the 'Cost of Living' crisis compounded with the energy crisis resulting from increased global energy demand post pandemic and the invasion of Ukraine.

This year the Housing Executive launched its Sustainable Development Strategy and Action Plan (2022-2027) which commits to improving its social and environmental impact, while helping tackle the cost of living crisis. Key strategic actions include improving our built environment, supporting the biodiversity, assisting sustainable communities and promoting sustainable transport. The Housing Executive also recognises the need for educational empowerment leading to behaviour change and improved health and wellbeing outcomes; through more sustainable living.

This strategy and action plan highlights the need for scaling up of implementing energy efficiency measures across Northern Ireland in all tenures, not just social housing, and collaboration and cross-governmental working is essential to overcome the social and economic challenges.

With the latest data from NISRA* highlighting Northern Ireland has only reduced its Green House Gases by just 24% in 30 years, the next 28 years will require a threefold increase in reduction to deliver Net Zero. This 'step change' is even more focused as 14% of greenhouse gases come from the residential sector. The Housing Executive's unique role as Northern Ireland's largest landlord and its Home Energy Conservation Authority, provides an opportunity as a sectoral lead to develop partnerships as we move toward Net Zero.

The Housing Executive is continuing innovative partnerships and collaboration with the Department for Communities, the Utility Regulator, the Consumer Council, local Councils, academia and other key stakeholders, to secure further reductions in energy consumption; deliver improvements in energy efficiency and research the development of de-carbonised heating solutions. All of this work will assist in the on-going effort to alleviate Fuel Poverty, reduce greenhouse emissions, promote green growth and improve householder health and wellbeing.

**22.23.037 NI Greenhouse Gas Emissions 2020 Infographic (daera-ni.gov.uk)*

References

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Acknowledgements

The Housing Executive would like to express its gratitude to all those involved in production of the Home Energy Conservation Authority Progress Report, 2022.

This document is available in alternate formats.
For further information on the HECA Progress
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