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An Roinn Geilleagair

Design of a Domestic Energy Efficiency and Heat Programme (DEEHP) for Northern Ireland

Scheme design report
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Executive summary

This report outlines the emerging design of a centrally operated Domestic Energy Efficiency and Heat Programme (DEEHP) for Northern Ireland. Developed in response to the Department for the Economy's ambition to accelerate retrofit activity and decarbonise homes, the approach aims to support a scalable and carbon-effective scheme that works fairly for both households and the wider supply chain. This scheme will build upon existing energy efficiency and low carbon heat support in Northern Ireland, applying lessons learned and best practices from UK and Irish programmes to the Northern Ireland context. The model is being published as an emerging approach for consultation and refinement.

At a glance:

- **Who:** Owner occupiers not eligible for fuel poverty/social housing schemes
- **What:** Tiered grants for cost-effective insulation and first-time adoption of low-carbon heat
- **How:** Managing Agent model with strong quality assurance and digital processes
- **Scale:** Increasing year-on-year as consumer confidence grows
- **Principles:** Simplicity, consumer choice and protection, regional balance, adaptability and scalability

Emerging model

An options appraisal considered different models. The Managing Agent approach emerged as an evolution from current NI practice as it:

- integrates the customer journey
- separates delivery from assurance
- enables proportionate, risk-based inspections, and
- provides levers to support regional balance and market stewardship.

Key features of the emerging model

- **Grant tiering and eligibility:** Public funding focuses on first-time adoption of low-carbon heating (such as heat pumps) and cost-effective insulation, as these deliver the greatest carbon savings and value for money. Higher support for lower income households and partial grants for others will enable broader participation. The grant structure and eligibility rules should be reviewed frequently to ensure alignment with other schemes and the market conditions.
- **Funding and affordability (indicative):** A mix of public funding and household contributions will be most effective for driving uptake and sustaining delivery. The split would need to be market-tested and kept under review.
- **Marketing and regional balance:** Clear, inclusive messaging and trusted government branding could address misconceptions and build confidence. Multichannel outreach would need to be tailored by region and segment. Ongoing evaluation will be needed to retarget effort and avoid geographic concentration.
- **Digital and inclusion:** A digital-first process can speed applications, reduce error and strengthen controls. Assisted channels (telephone and accessible formats) will be needed to ensure no eligible household is excluded.
- **Quality and consumer protection:** Households are at the heart of this programme. Good-quality installations are essential to deliver the carbon and energy savings predicted and to ensure households are satisfied with the outcome. Centralising quality management supports every household receiving the same high standard of service, regardless of location or measure type. This includes installer accreditation, independent risk-based inspections for complex measures, compliance with clear standards, and robust documentation and warranties. Strong customer satisfaction processes and a transparent complaints system, with clear escalation routes, are critical to maintaining trust and consistency.

Key risks and mitigations

- **Installer capacity:** phased ramp up, framework breadth, skills signalling, and workload monitoring.
- **Cost inflation/market volatility:** periodic grant review, benchmarked pricing, and formal change control processes.
- **Oversubscription/undersubscription:** demand management levers (marketing cadence, profiling), and iterative grant levels.
- **Digital exclusion:** assisted channels and accessibility standards.
- **Quality/reputation:** independent inspections, contingent payments, warranties, and clear redress routes.

Taken together, the emerging design incorporates extensive learning from the experience of schemes across the UK and Ireland. It builds on the existing successes, ambitions and wider delivery context of the transition to low-carbon homes across Northern Ireland. It offers flexibility to adapt grant levels, eligibility rules and delivery processes in response to evidence, consultation feedback and market conditions.

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1. Strategic context and programme rationale

1. Strategic context and programme rationale

Residential decarbonisation, especially through heat pumps and reducing energy demand, is central to Northern Ireland's efforts to meet statutory carbon reduction targets. The Domestic Energy Efficiency and Heat Programme (DEEHP) is intended to accelerate progress by supporting owner-occupiers who are not eligible for fuel poverty schemes and so help broaden participation in the transition to low-carbon heating and improved energy efficiency.

Broader consumer attitude surveys indicate high willingness in principle (78% would welcome renewables) but there is low knowledge and confidence, especially for low-carbon heating systems.[1] There is relatively little direct evidence on consumer-led demand beyond existing schemes. Uptake to date has largely been supported by grants, and there are few signs of a strong self-financing market for deep retrofit. Economic modelling indicates that a mix of public funding and private contributions will likely be needed to stimulate demand, as a purely market-led approach may fall short of achieving carbon targets.[2]

DEEHP's design draws on lessons from previous Northern Ireland schemes and best practice from the UK and the Republic of Ireland (ROI), recognising that targeted financial support, accessible scheme design, and trusted advice are effective in overcoming affordability barriers and encouraging uptake. This approach could also help build a robust green supply chain, supporting skilled jobs and long-term sector capacity. Strengthening Northern Ireland's retrofit and heat pump installation capacity directly supports delivery of the Green Skills Action Plan,[3] our strategy to equip people with the knowledge and skills needed to support a sustainable, low carbon economy, and our commitments in the draft Green Growth Strategy.[4] By stimulating demand for retrofit and clean heat technologies, DEEHP can accelerate growth and unlock the wider economic opportunities through enhanced green skills and supply chain development.

By aligning with the Department for the Economy's Energy Strategy and focusing on scalable, regionally balanced delivery, DEEHP represents an emerging way forward that could help ensure the benefits of decarbonisation are shared across all communities, while supporting wider economic and environmental ambitions. It also strengthens energy security, especially by reducing Northern Ireland's dependence on fossil fuels such as heating oil, which remains widely used in homes.[5] Expanding renewable heat technologies and improving energy efficiency will help lower long-term exposure to volatile global fuel prices and support a more resilient, low carbon energy system.

1 Consumer Council Attitudes to the Energy Transition Report, Spring 2023
2 Investigating the potential economy wide impacts of energy efficiency improvements in Northern Ireland, Fraser of Allander Institute May 2024
3 Green Skills Action Plan, Northern Ireland Executive, May 2025
4 Green Growth Strategy for Northern Ireland, last accessed March 2026
5 Oil central heating remains the primary heating source for over 60% households, Northern Ireland Statistics and Research Agency, November 2025

Northern Ireland faces a critical challenge in decarbonising its economy to meet the legally binding carbon budgets set out in the Climate Change Act (Northern Ireland) 2022. The residential sector accounts for a significant share of emissions (12%),[6] making it a priority for action. Improving the energy efficiency of homes and accelerating the transition to low-carbon heating are essential steps toward achieving net zero.

This report sets out an initial description of a proposed Domestic Energy Efficiency and Heat Programme (DEEHP). The programme is intended to support households in reducing energy demand and adopting low-carbon heating solutions, while also contributing to wider economic objectives. DEEHP will need to align closely with the Northern Ireland Executive's Energy Strategy,[7] ensuring that delivery is fair, regionally balanced and designed to deliver carbon savings.

While targeted objectives of DEEHP will be finalised following a period of consultation on its design, and scheme rules, the programme is expected to contribute to the following broad aims:

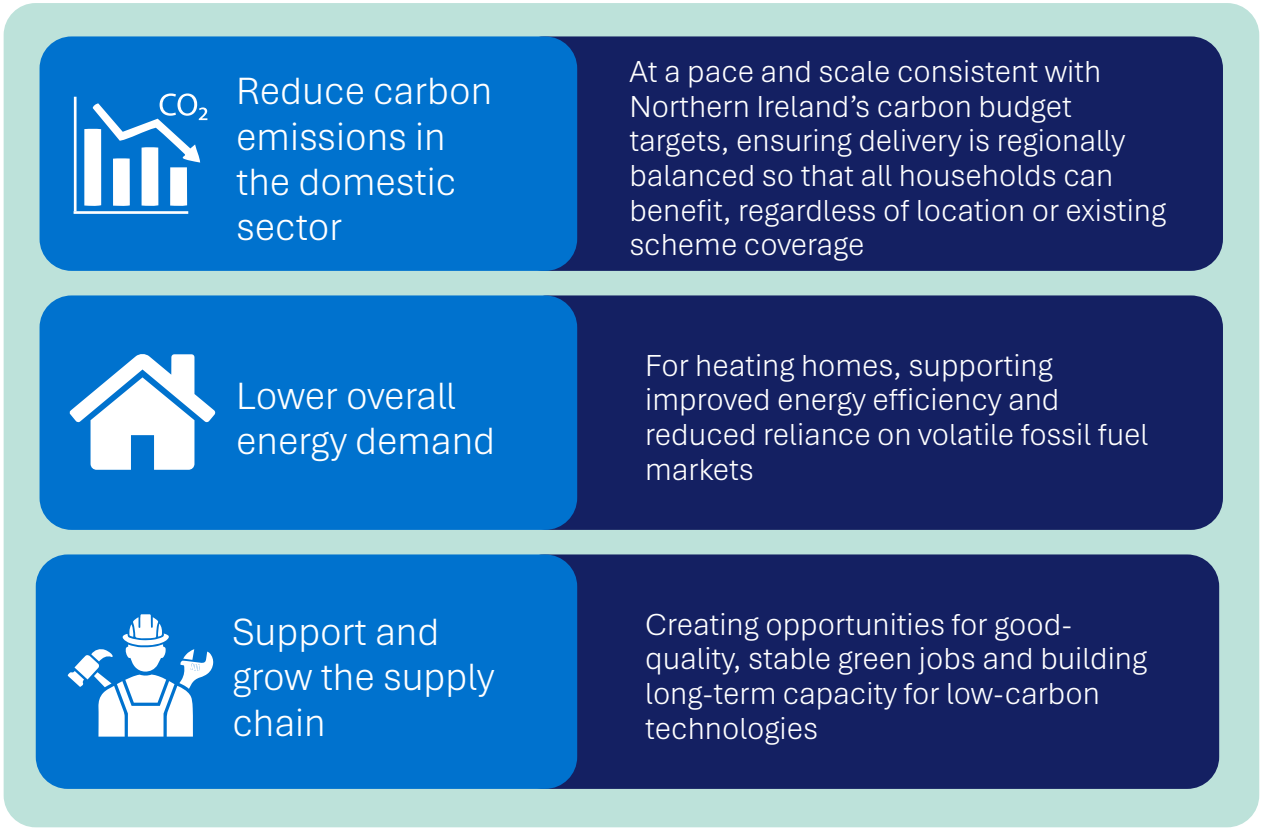


Figure 1. Summary of objectives for DEEHP

Delivering these outcomes will help support the wider Energy Strategy which aims to reduce household energy bills by decoupling from volatile fossil fuel energy markets, alongside improved comfort and health, and lower emissions from the residential sector. DEEHP also has the potential to strengthen the supply chain, increase workforce capacity and ensure that the benefits of the transition to net zero are shared across all communities.

6 Climate Change Committee (2025). Northern Ireland's Fourth Carbon Budget. Advice for the Northern Ireland Executive.
7 DfE (2021). Energy Strategy – Path to Net Zero.

1.1 Accelerating residential decarbonisation

Reducing Northern Ireland's reliance on fossil fuels is a central aim of the Northern Ireland Executive's Energy Strategy, which sets out a clear objective to "replace high carbon heating sources with lower and zero carbon sources in households." Achieving this will require a diverse mix of technologies and approaches, tailored to the wide variation in building types, ages and locations across the region.

Electrification and the use of heat pumps are expected to play a foundational role, recognising that heat pumps are suitable for every house type but not for every home. Their efficiency and carbon saving potential make them a significant opportunity for intervention within a wider decarbonisation programme. Internal analysis completed by Energy Saving Trust suggests that significant carbon savings could be achieved by replacing oil boilers with heat pumps (up to 25.8 $MtCO_2e$ across NI[8]). However, current uptake in Northern Ireland remains low with an estimated 1,100[9] air source heat pumps and over 550 ground source heat pumps installed as of 2021.

Experience from other European countries, as highlighted by the European Heat Pump Association,[10] shows that grant-based incentives have been key to driving uptake. A similar approach in Northern Ireland could help accelerate adoption, particularly if designed to reflect household needs and regional capacity.

DfE has also published Calls for Evidence on the potential role of bio fuels, including biomethane, hydrotreated vegetable oil (HVO), and bio propane (BioLPG).[11,12] These fuels remain under assessment and are not included within the scope of DEEHP. While they may offer complementary options in the longer term, further evidence will be required to determine their feasibility, cost-effectiveness and carbon impact.

8 Energy Saving Trust (2025).
9 KPMG (2022). Heat Pump Sector in Northern Ireland. Figures not up to date and under-representative of actual installs, though this does not alter the broader narrative.
10 European Heat Pump Association (2023). Subsidies for residential heat pumps in Europe.
11 DfE (2025). Consultation - Using Biofuels to Transition Away from Fossil Fuels for Heating.
12 DfE (2025). Consultation - Developing biomethane production in Northern Ireland call for evidence.

1.2 Reducing energy demand across the housing stock

Almost half (48%) of total metered electricity consumption in Northern Ireland comes from indigenous renewable sources,[13] but we are still reliant on fossil fuel imports, impacting bills and energy security. Reducing energy demand is therefore essential to achieving carbon reductions, reducing household bills and Northern Ireland's exposure to global price volatility.

Evidence from the UK shows that reducing energy demand in housing is most reliably achieved through insulation and fabric improvements and installing highly efficient heating and hot water systems.[14] Insulation is recommended as a priority for reducing energy demand and emissions[15]. This represents a low-risk measure, with very few associated drawbacks, which can normally be mitigated by ensuring that the home is sufficiently heated and ventilated. Insulation and efficient heating can cut energy use, lower bills and support carbon targets.

1.3 Growing the green economy

Delivering energy efficiency and low-carbon heating at scale will require a robust, skilled and well-supported supply chain, a need recognised by both UK and Irish Governments.[16,17]

A regionally balanced approach to investment and support through programmes such as DEEHP will be essential to ensure that all Northern Ireland benefits through access to retrofit and the creation of good, green jobs, while a focus on quality will build trust and resilience across the supply chain. This could not only help meet climate targets but also grow the green economy.

1.4 Engaging all households

There has been progress towards reducing total emissions, but the pace and scale of change must accelerate significantly to meet the climate targets. Achieving the necessary reductions demands a coordinated, cross-sectoral approach combining incentives, regulation and market development.

Policy instruments are at varying stages of maturity. For example, Building Regulations (in particular, Part F and Part L) are already resulting in more energy-efficient new homes. Existing schemes (e.g. Northern Ireland Sustainable Energy Programme, NISEP) have delivered important gains for vulnerable and lower-income households while social housing is supported through existing regulatory and funding frameworks. The private rented sector is expected to be driven by minimum energy efficiency standards.[18]

Middle- to higher-income owner-occupier household groups living in older housing stock represent a significant share of the market yet remain underserved as they do not qualify for fuel poverty or vulnerability-focused schemes. Other parts of the UK and ROI have offered government grants to this group to enable action. Examples are presented in the table below.

13 DfE (2025). Electricity Consumption and Renewable Generation in Northern Ireland: Year Ending June 2025.
14 RISE | Retrofit Information, Support and Expertise (2024). Advice Pack Understanding the fabric first approach.
15 UK Government (2024). Home is where the heat is: Energy efficiency and home insulation.
16 Department for Energy Security and Net Zero (2025). Domestic Energy Efficiency Retrofit Supply Chain.
17 Sustainable Energy Authority of Ireland (2025). Ireland's Sustainable Energy Supply Chain Opportunities.
18 Private Tenancies Act (Northern Ireland) 2022

Scheme	Geography	Offer and beneficiaries
Boiler Upgrade Scheme (BUS)	England and Wales 	Grants of £7,500 for homeowners and small business property owners to replace a gas boiler with a heat pump (or biomass boiler) and £9,000 if replacing an oil boiler. Aims to support decarbonisation of heat in existing buildings, with over half of installations in households with annual income above £52,000.
Home Energy Scotland Grant and Loan (HES – G&L)	Scotland 	Combination of grants (up to £7,500 per measure, plus rural uplift) and interest-free loans for homeowners to install clean heating systems (e.g. heat pumps, biomass) and energy efficiency measures like insulation.
Better Energy Homes (BEH)	Republic of Ireland 	Varied grants for homeowners and landlords to improve energy efficiency through measures such as loft and wall insulation, heating controls and heat pumps. Requires approved contractors and applies to homes built before 2006.

Table 1. Example offers and beneficiaries of comparative schemes

The DEEHP could help address this gap in Northern Ireland's provision by providing a clear signal from government and offering targeted support to unlock action. For some households, this may mean overcoming affordability challenges; for others, it may provide the confidence to proceed with retrofit decisions.[19] Feedback from engagement with households as part of potential DEEHP design[20] suggests that providing clear integrated policy, targeted communications which build trust, and clear accessible routes to support are among the key enabling factors to support households in that group to act.

Designing DEEHP to complement new and existing schemes and regulatory measures, while working alongside broader market development initiatives, can help maximise its success.

19 MCS Foundation (2025). Homeowner attitudes to retrofit finance.
20 Energy Saving Trust (2025) for DfE; DEEHP Gap analysis workstream (unpublished).

1.5 Reducing complexity and supporting consumer choice

The transition to energy efficient homes and decarbonised heat will require participation from all groups. DfE remains committed to taking a consumer centric approach to policy decisions.

Feedback from user research and engagement with delivery stakeholders has consistently highlighted two priorities for any future scheme: simplicity and choice. UK and Republic of Ireland experiences reinforce this view. For example, ROI's Better Energy Homes Scheme has introduced a One-Stop Shop (OSS) service alongside homeowner-led applications, to ease the administration burden on the homeowner, although Sustainable Energy Authority of Ireland (SEAI) noted it was still too early to assess the effectiveness of the OSS approach. The installer-led model of the Boiler Upgrade Scheme in England and Wales has worked well, with most households who completed installations under the scheme reporting satisfaction.[21] However, UK Government's Department for Energy Security and Net Zero (DESNZ) noted that installers acting as the "middleman" has limited their visibility of customer drop-out rates and their reasons for dropping out. These models show the impact of processes on delivery efficiency.

Stakeholders engaged in the research for this report pointed out that the current processes are complex, with multiple steps and fragmented responsibilities creating barriers for both households and suppliers. This complexity often leads to delays or disengagement, particularly when households are required to navigate technical requirements or coordinate multiple contractors.

Households interviewed valued choice but also acknowledged that they face a significant knowledge gap, which can lead to uncertainty and hesitation. They also expressed a desire for protection and reassurance.

Across engagement activities, participants consistently identified government as the most trusted source of impartial advice. They want to know that the information they receive is reliable, and that the installers they work with are vetted and accountable.

These insights suggest that DEEHP could benefit from aiming to combine clear, simple processes with trusted advice and flexible delivery options, ensuring that households can make informed decisions without unnecessary complexity.

21 DESNZ (2025) Evaluation of the Boiler Upgrade Scheme.



2. Programme Scope

2. Programme scope

DEEHP should aim to broaden participation while ensuring fairness and impact. The programme is intended for households not covered by fuel poverty schemes, but recognising that this could leave a gap, flexibility is essential. Making sure there is an offer for all households is central to achieving net zero.

Based on lessons from UK and ROI schemes, this could include additional support for lower-income households who do not qualify for fuel poverty schemes. One approach could be a tiered grant structure, offering proportionately higher support where financial barriers are greatest, while still providing partial assistance to others. This ensures public investment is targeted where it unlocks the most benefit, while maintaining inclusivity.

Priority should be given to first-time adoption of low-carbon heating (such as heat pumps) and cost-effective insulation, as these deliver the greatest carbon savings and value for money. Grant amounts will need to be modelled based on affordability and market data and kept under review to ensure the scheme remains responsive.

2.1 Target market

DEEHP could address a significant retrofit gap among middle- and higher-income households who often cannot afford the upfront costs of energy efficiency measures. Even households with relatively high incomes may be deterred by these costs, especially given potential uncertainties around operating costs for heat pumps. Public investment in this segment could enable carbon reductions at an increased pace and scale, while improving the nation's housing stock, a strategic priority that benefits all Northern Ireland.

To do that, DEEHP is intended to complement future fuel poverty programmes. While the details of a future fuel poverty scheme are not available, DEEHP has been modelled on the assumption that such a scheme will exist.

Defining the addressable market

For the purposes of this report, the addressable market is defined as households that are not eligible for support through other routes

- Are not in social housing,
- Are not in the private rented sector, and
- Are not owner-occupiers who are eligible for existing fuel poverty support.

Applying these criteria suggests that the majority of around 464,000 households could be in scope for measures such as energy efficiency improvements and low-carbon heating solutions through DEEHP, activating a significant proportion of the market that could otherwise not participate fully in the transition.

What does this addressable market need?

In a Consumer Council NI Attitudes to the Energy Transition survey,[22] 52% of those who were unlikely to improve energy efficiency said the cost of the improvements is too high. Similar findings were evidenced in a UK Government report, Great British Insulation Scheme: willingness to co-fund: a discrete choice experiment,[23] where the most frequently selected reason for never choosing solid/external wall insulation, room-in-roof insulation, and underfloor insulation was "I cannot afford the installation costs" (70%, 56%, and 47%, respectively). Similarly, a report by Citizens Advice states that whilst 72% of UK homeowners express interest in retrofitting their homes,[24] uptake is low due to high upfront costs.

Even households with moderate or higher incomes often hesitate to invest in energy efficiency or low-carbon heating without a clear signal from government. Grants motivate 65% of homeowners to act.[25] Some delay upgrades in hope of better support.[26]

Larger grants significantly boost uptake. The Great British Insulation Scheme report also found that uptake increases as homeowner contributions decrease. In a scenario involving underfloor insulation costing £2,700, when no consumer contribution is required, the research simulation estimated uptake at 60%. This declines to 54%, 42%, and then 33% as the subsidy falls and consumer contributions rise to £1,200, £1,950, and £2,700, respectively.[27]

Retrofit decisions can involve high upfront costs, long payback periods and unfamiliar technologies which are all factors contributing to uncertainty and inertia. Providing targeted financial support, alongside a strong policy signal, could help unlock action in this segment and accelerate progress toward Northern Ireland's carbon reduction targets.

22 Consumer Council (2023). Attitudes to the Energy Transition.
23 Department for Energy Security & Net Zero (2023). Great British Insulation Scheme: willingness to co-fund: a discrete choice experiment.
24 Citizens Advice (2025). Consumer attitudes to retrofit: Examining the barriers and motivators for consumers when making energy efficiency or low-carbon home upgrades.
25 MCS Foundation (2025). Homeowner attitudes to retrofit finance.
26 MCS Foundation (2025). Homeowner attitudes to retrofit finance.
27 Department for Energy Security & Net Zero (2023). Great British Insulation Scheme: willingness to co-fund: a discrete choice experiment.

2.2 Eligibility

While the DEEHP approach should be based on a principle of broad eligibility, it is also important to ensure that resources are targeted in a way that represents value for money in achieving the programme's ambitions. The following sections outline potential approaches to household eligibility and measure eligibility, together with the rationale for each and how they contribute to DEEHP's strategic goals.

Household eligibility

Household eligibility is defined by two key characteristics: tenure and income.

Tenure

DEEHP is targeted at owner-occupiers, to direct funding to households who are not supported through other routes, but who are critical to meeting carbon targets. According to Census data, owner-occupiers, account for 65.2% of households.[28] The UK Energy Research Centre highlights that owner-occupiers as the primary decision makers for home improvements, are more easily reached through policy interventions like grants, one-stop shops and education support compared to tenants and landlords.[29]

Income

DEEHP is designed on the basis that a separate fuel poverty scheme will be the primary route of support for households who meet fuel poverty eligibility criteria. Its role is therefore complementary, and there is not intended to be overlap between the programmes.

At the same time, DEEHP recognises that there is a significant group of 'working-poor' households. It is likely these are households with incomes too high to qualify for a fuel poverty scheme, yet too low to afford a financial contribution to energy efficiency or heating upgrades that would benefit the comfort of their home, while reducing their bills and carbon emissions.[30]

These households are critical to achieving Northern Ireland's decarbonisation targets and without tailored support, they risk being left behind in the transition to a low-carbon future.

To address this, DEEHP has explored a tiered approach, segmenting eligibility based on occupancy and income, with offers designed to reflect financial capacity. This approach reserves a proportion of funds for higher support for lower-income households outside fuel poverty schemes, while maintaining flexibility to adjust once other schemes are finalised. The aim is to promote fairness and continuity while ensuring inclusivity.

Although the design of the fuel poverty scheme is not yet confirmed, DEEHP modelling assumes eligibility may extend to households up to the median income level. This assumption is based on analysis in Impact of 2022 Fuel Prices on Fuel Poverty in Northern Ireland,[31] which estimated that, under 2022 fuel prices and with the Energy Price Guarantee, approximately 50.4% of households could be considered fuel poor based on 2021 projections. Median income therefore provides a practical reference point for illustrating tiering.

Households above the median income threshold may still face affordability challenges, and requiring contributions could limit uptake.

To illustrate the gap, DEEHP has considered the precedent set by NISEP. Maximum income thresholds under NISEP require households to contribute towards heating components only,

28 Northern Ireland Statistics and Research Agency (2021) Census data.
29 UK Energy Research Centre (2025). Accelerating Energy Efficiency Retrofits in Owner-Occupied Homes.
30 Northern Ireland Assembly (2015). Comparison of in-work poverty in NI, GB and ROI.
31 Impact of 2022 fuel prices on fuel poverty in Northern Ireland, BRE for the Nothern Ireland Housing Executive, published March 2024

while other eligible measures are fully funded. In 2024/25, householder contributions were 50%, however, this decreased to 40% in 2025/26, suggesting that demand for heating measures remained limited with 50% contributions.

Building on this, DEEHP could offer greater support for measures for lower-income households, while ensuring partial support for all. For example:

- Fuel poverty scheme: measures are expected to be fully funded for households meeting fuel poverty criteria, with eligibility thresholds and definitions to be confirmed through further policy development.
- DEEHP tiering: exploring options to provide additional support to households above fuel poverty thresholds who face affordability barriers, while ensuring that overall funding is used efficiently to maximise participation and scheme impact across Northern Ireland.

This tiered approach combines flexibility with impact, reducing financial barriers while maintaining inclusivity and continuity across schemes.

2.3 Measure eligibility

To ensure the DEEHP programme delivers maximum impact within available resources, it is essential to define clear rules around choosing which measures will be included under the programme.

Several major retrofit programmes (for example Better Energy Home or the Boiler Upgrade Scheme) apply rules-based criteria to set which measures are eligible for funding,[32] and run consultations before changing eligibility (e.g. DESNZ consultation to expand eligibility to Boiler Upgrade Scheme for non-hydraulic heat pumps and heat batteries).[33] These criteria include checks for technical feasibility, assurances and compliance with standards, carbon savings potential, cost-effectiveness and market readiness, and work to provide a framework that improves industry and householder understanding of how technologies are selected, prioritised and integrated into schemes as markets evolve.

Proposed rules

To ensure transparency, consistency, and strategic alignment, DEEHP could adopt a rules-based approach to determine which retrofit measures in which circumstances are eligible for public funding.

Proposed measure-eligibility rules

1. **Alignment with programme objectives**
   To ensure public funding is used effectively, measures supported through DEEHP should show alignment with programme priorities, meet technical standards and suit the property context.
2. **Proven performance and evidence base**
   Measures should be backed by robust, independent evidence of real-world performance in UK or Irish housing stock.
3. **First-time adoption focus**
   Replacement of existing low-carbon systems is not eligible as it offers limited carbon savings compared to first-time transitions.

32 Energy Saving Trust (2025). Benchmarking Report for Design of a Domestic Energy Efficiency and Heat Programme (Unpublished). Detailed descriptions of criteria have been included, and signposted where more practical due to criteria changing over time, within this report.
33 Boiler Upgrade Scheme and certification requirements consultation

4. **Delivery feasibility**
   To be eligible, a measure will require sufficient installer capacity, supply chain readiness, and quality assurance in place. This ensures that measures can be rolled out reliably and safely across Northern Ireland.

   Additional measures may become available through the lifetime of the scheme as emerging technologies become sufficiently evidenced and deliverable.

5. **Cost-effectiveness**
   To be considered eligible, a measure must demonstrate strong value for money in delivering the programme's objectives. For example, by delivering strong carbon savings per pound spent and long-term energy savings for households.

Indicative list of measures

The following list highlights the types of measures that may be considered eligible based on the rules suggested above:

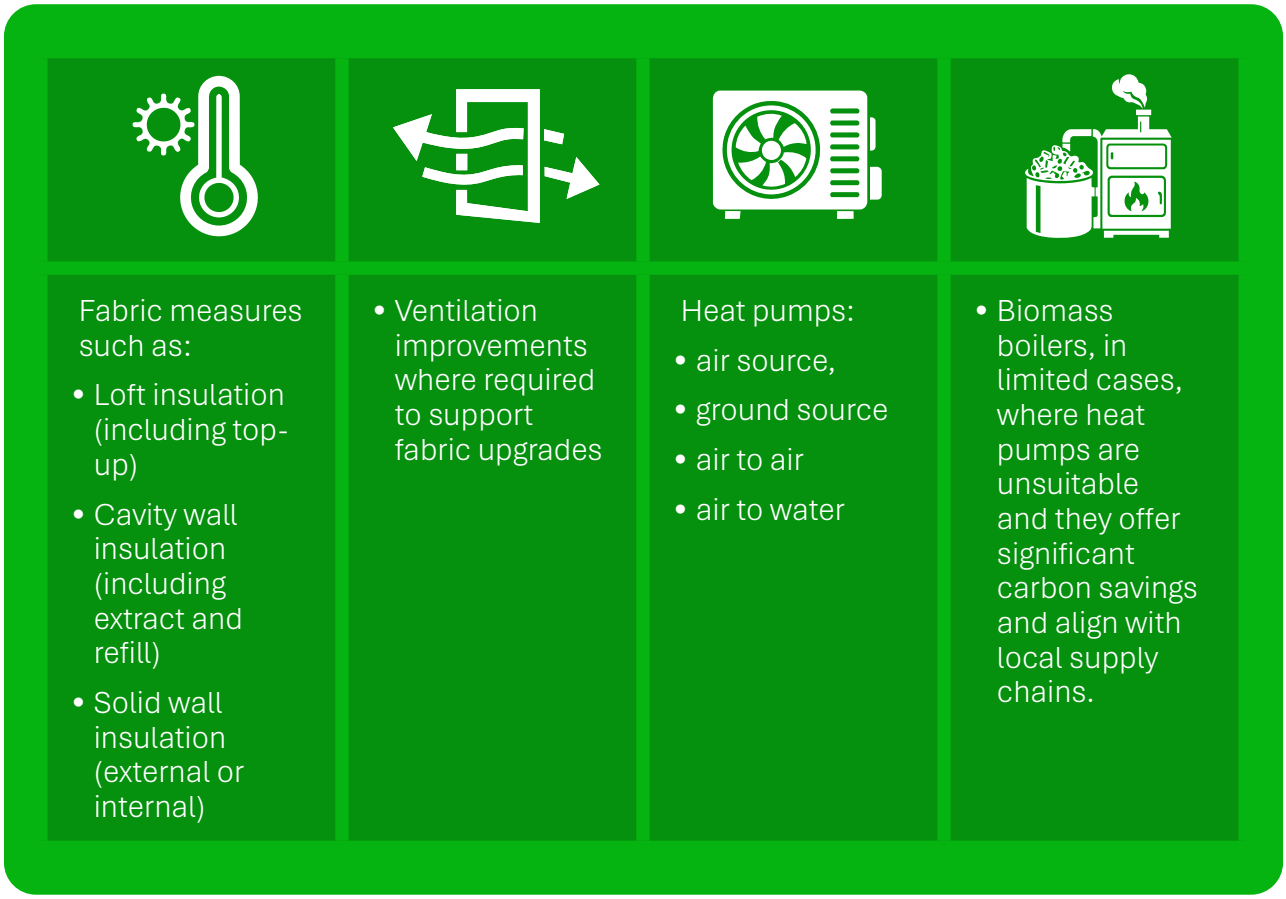


Figure 2: Potential measures to be included

While biomass systems typically have lower system efficiencies than modern oil boilers (80–95% vs. up to 96%),[34] they may be appropriate in specific rural or off-grid contexts.[35] DEEHP currently models minimal uptake (<10 installs/year) but includes them to be able to offer a heating replacement option in exceptional cases.

The list of possible supported measures is in line with Scottish Government's Home Energy Scotland Grant and Loan and SEAI's Better Energy Homes.

34 Based on analysis of the Product Characteristics Database, taking an average across all wood pellet and oil boilers registered. Analysis conducted by Energy Saving Trust in June 2025.
35 Department for Energy Security & Net Zero (2023). Biomass Strategy.

Excluded measures

Some technologies are presently excluded from the current DEEHP emerging way forward. These exclusions reflect policy direction, budget constraints or delivery feasibility, but do not imply the measures lack value in the wider decarbonisation effort.

Examples include:

- **Oil-to-gas conversions**
  Following these rules, oil-to-gas conversions would be excluded from the DEEHP programme, in line with DfE's strategic direction to prioritise electrification of heat.
  Although a potential role for biomethane and hydrogen in decarbonising the gas grid has been recognised, the evidence base for these pathways remains under development.
- **Hybrid heat pumps**
  Hybrid heat pumps are currently excluded as they rely on fossil fuels and show lower efficiency than standalone heat pumps.[36]
- **Replacement of existing low-carbon heating systems**
  DEEHP does not support the replacement of existing low-carbon heating systems, such as heat pumps or biomass boilers. This reflects the programme's focus on first-time adoption of low-carbon heating, targeting households currently using high-carbon systems like gas, oil or coal.

Future measures and review

In line with practice from other schemes, such as ECO4 or Better Energy Homes, DfE will retain the authority to review and update the rules and the list of eligible measures as new technologies emerge or their evidence improves, or as delivery capacity evolves.

This flexibility is essential to ensure the programme remains responsive to market developments and evolving policy priorities. It allows DfE to adapt the scheme over time, ensuring that public investment continues to deliver maximum impact in terms of carbon savings, energy efficiency, and supply chain development.

36 Energy Saving Trust analysis of demonstration project data gathered by Energy Systems Catapult for DESNZ Electrification of Heat Demonstration

2.4 Grant amounts

DEEHP will need to clearly set out the grant tiers and indicative contribution levels for households participating in the programme and keep these under review as the market and delivery capacity evolves. SEAI's Behavioural Insights Report[37] identifies a "lack of clear, upfront cost information" as a major barrier in the customer journey, with households often abandoning plans when costs are unclear or revealed late in the process.

In developing the scheme, a number of core objectives have been identified to guide decisions on grant support and household contributions. These objectives are intended to ensure the scheme remains accessible to households, delivers strong value for money, and supports the effective growth of the retrofit market across Northern Ireland. At the same time, the approach recognises the importance of providing households with clear and reliable information to support what are often significant, longer-term investment decisions.

- **Affordability**: ensuring households can participate without undue financial strain, with support targeted to reduce barriers where they are most significant
- **Additionality:** directing funding to enable actions that would not otherwise take place, maximising the impact of public investment
- **Value for money:** ensuring funding is allocated efficiently to maximise the number of homes benefiting from the scheme across Northern Ireland
- **Market viability:** ensuring grant levels reflect real market costs, enabling the supply chain to deliver to a high standard and operate on a sustainable, commercially viable basis
- **Market development:** supporting the effective scaling of the retrofit supply chain, taking account of industry capacity and delivery constraints
- **Transparency and certainty:** providing households with clear, upfront information on expected costs and contributions, with grant support remaining stable throughout the customer journey wherever possible, and any changes communicated clearly and in a timely manner.

These principles will be applied collectively in setting and reviewing support levels over time. This will ensure the scheme remains responsive to changing market conditions while maintaining a clear, fair, and predictable offer for households. In doing so, the scheme aims to strike an appropriate balance to best support delivery of high-quality retrofit at scale across Northern Ireland.

37 Sustainable Energy Authority of Ireland (2023). Promoting retrofitting among homeowners in Ireland through a behavioural lens.



Table 2: Potential measures avaiable

* For Tier 1, ground source heat pumps should only be installed in exceptional cases where their higher cost can be justified by significant savings compared to an air-to-water heat pump. Energy Saving Trust modelling indicates this is unlikely, as efficiency gains rarely offset the additional expense, and therefore is only minimally included in the financial model. Households may still choose to contribute if they wish to proceed with a ground source heat pump system (i.e. treated as a Tier 2 application).

** Biomass pellet boilers are only expected to be installed in exceptional circumstances where a standalone heat pump is not technically suitable. These haven't been considered to need support under a tiered structure, and so the contribution level has been set the same.

*** Solid wall insulation costs are highly volatile (i.e. they won't pay back in terms of energy saved within the expected lifetime of the measure). To manage budget forecasting, DEEHP may wish to exclude solid wall insulation from Tier 1 (fully funded) unless an appeal on cost-effectiveness can be evidenced.

**** Solar PV and battery storage are included in Tier 1 to improve the likelihood of heat pump suitability and to protect households from higher running costs. This is particularly important where for Tier 1 households, government has an increased need for protecting from price increases. In Tier 2, these remain unsubsidised because uptake among higher-income households for solar photovoltaics and batteries is already strong without government support, driven by energy bill savings and resilience benefits.



3. Scheme administration

3. Scheme administration

Delivering retrofit at scale requires a model that is simple, protects consumers, and ensures consistent quality. Evidence from previous schemes across the UK and ROI shows that fragmented administration and weak oversight can undermine uptake and trust. Existing delivery models vary widely and include direct delivery (including one access route to Better Energy Homes), installer-led (Boiler Upgrade Scheme), household-led (Home Energy Scotland Grant and Loans), primary bidder routes (NISEP) and managing agent delivery (Better Energy Homes access route, and ECO). Each delivery model has been shaped by strategic priorities and regional contexts, each have strengths but also limitations around complexity, quality assurance, or regional balance.

For Northern Ireland, a centrally managed scheme using a Managing Agent has emerged as a strong evolution of the current schemes to support strategic priorities. This approach would build on the strengths of existing delivery models and apply lessons learned. It offers the potential for robust consumer protection, consistent quality assurance, and efficient coordination. Under this model, the Managing Agent would oversee operations, installer engagement, grant payments, and customer support. Digital systems would support streamlined applications, eligibility checks, and fraud prevention. The Managing Agent would ensure regional balance and transparent processes, aiming for operational efficiency, accountability, and flexibility.

3.1 Scheme administrative model

Selection of the scheme administrative model

A structured options appraisal was undertaken to identify the most appropriate administrative model for DEEHP to ensure a balanced evaluation of strategic fit, deliverability and value for money. This involved looking at the offers available to households across Northern Ireland, Great Britain, and the Republic of Ireland, exploring the elements that make these approaches successful and considering how they could be adapted for Northern Ireland and DEEHP.

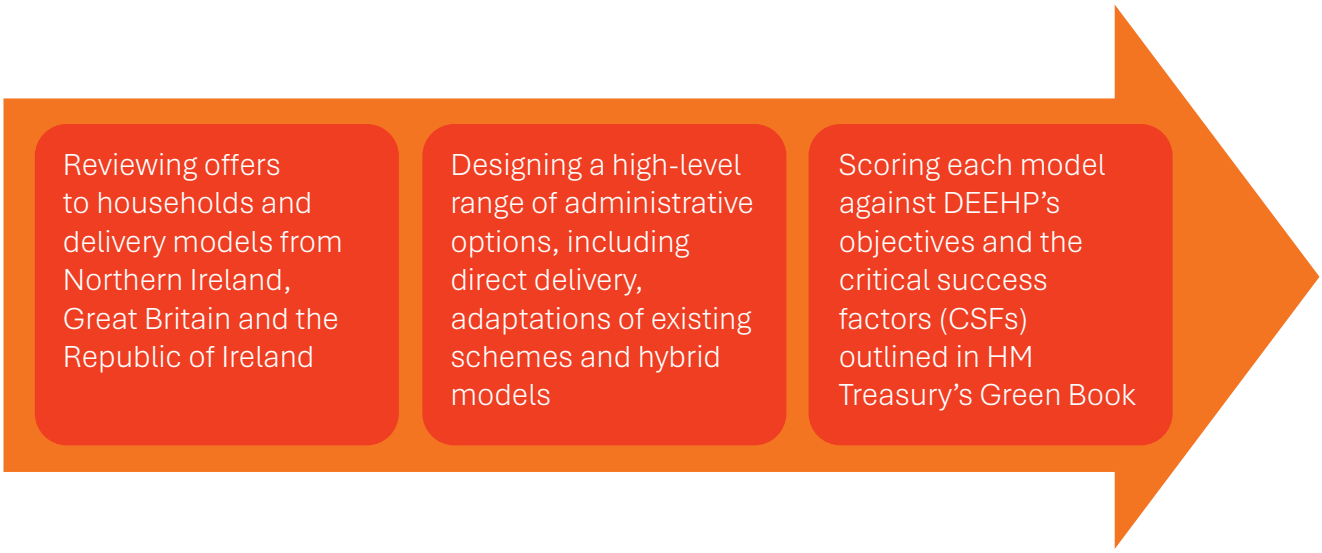


Figure 3: Options appraisal overview

Scheme	Geography	Delivery model
Boiler upgrade scheme (BUS)	England and Wales 	Installer-led. Provides a capital grant for installing a low carbon heating system. DESNZ sets policy, legislation and scheme rules. Ofgem acts as scheme administrator, with installers applying to Ofgem to claim the grant (voucher).
Home Energy Scotland Grant and Loan (HES - G&L)	Scotland 	Householder-led. Grants and loans for clean heating and energy efficiency measures. The Scottish Government sets policy, legislation and scheme-rules. Energy Saving Trust administers the scheme, managing the applications and homeowner contact. Householder arranges installation and installer payment. Advice on measure suitability provided under a national advice service.
Better Energy Homes (BEH)	Republic of Ireland 	Direct-delivery and managing agent routes. Provides grants and loans for installing energy efficiency measures and low carbon heating. The Sustainable Energy Authority of Ireland administers the scheme, managing contractors for customer services, property inspections, and numerous private companies via “one stop shop” (OSS) services. Property owners can apply directly or use an OSS provider to manage applications and installation. Loans are provided by the Strategic Banking Corporation of Ireland.

Table 3: Example delivery models of comparative schemes

Based on this approach the following high-level options emerge for DEEHP:

Model	Example	Considerations
Direct delivery	Better Energy Homes (Route 1)	Under direct delivery models, regional one-stop shops manage the entire retrofit process, covering assessment, design, installation and quality checks on behalf of households. Streamlined and centralised model, but would require new operational expertise and capacity: • Established one-stop shop network • Accredited installer network linked to the scheme to support consumer protections • End-to-end administrative processes
Installer-led model	Boiler Upgrade Scheme	The installer-led model means the installer manages the application process and coordinates the grant on behalf of the householder, reducing complexity for consumers and speeding up delivery. Effective and minimises bureaucracy for households, but poses challenges for DEEHP's multi-measure and regionally balanced approach: • All guidance and advice provided by installers focussed on a single technology, with a risk for biased choices • No mechanism for regional balance • Consumer protections largely market-driven, with safeguards for complaints handling and redress based on individual installers
Primary bidder model	NISEP – Northern Ireland Sustainable Energy Programme	Organisations (primary bidders) apply and manage the funding for a scheme, delivering it directly or through subcontractors, but in either case acting as the main point of accountability for performance and compliance. Can deliver significant outcomes, particularly for fuel-poor households but for DEEHP would be further improved in areas of: • Coordination requirements and fairness considerations of a multi-scheme model • Administrative processes • Independence of quality assurance • Entry requirements for installers • Customer engagement and technical support • Marketing approaches

Table 4: Potential delivery models for DEEHP (continues on next page)

Model	Example	Considerations
Household led model	Home Energy Scotland - Grant and Loans, Better Energy Homes (Route 2)	The household-led model means the householder applies for funding and organises their own installation, choosing installers and coordinating works themselves, while the programme provides advice and grants but does not manage delivery. This offers flexibility and consumer choice but risks inconsistent quality assurance if there is limited access to impartial guidance. • Relies on strong network of advice and information services • Households manage installations themselves, which can lead to different experiences and outcomes
Managing agent model	ECO, Warmer Homes Scotland	Managing agents oversee the full customer journey, providing a single point of contact and releasing payments only after verified completion and quality checks. This helps ensure public funds are tied to compliance and standards. Key success factors include: • Integrated customer support across the entire process, with each organisation involved in delivery suitably incentivised to prioritise household outcomes • Consideration of additional administrative costs due to the oversight and verification requirements. • Need to actively build a regionally balanced network of installers and ongoing engagement to avoid geographic gaps.

Table 4: Potential delivery models for DEEHP (continued)

A tiered grant delivered via a Managing Agent emerged as the most effective and feasible option. It offered strong alignment with strategic goals, evolution from the existing schemes, operational deliverability and the ability to adapt to Northern Ireland's specific context. It draws on successful elements from the models and addresses their limitations.

Model	Best practice and lessons applied
NISEP	Customer-focused delivery and established supply chain relationships, with improvements based on lessons learned, including streamlining the scheme structures for ease and equality, strengthening quality and transparency by separating assurance from delivery, setting clear installer entry criteria, offering integrated technical support, and enforcing rigorous inspections before payment.
Better Energy Homes	Independent, technical advice, with technical surveys integrated into DEEHP's delivery model, with a more streamlined delivery model.
Home Energy Scotland Grants and Loans	Central coordination of customer journey and technical support, adapted to Northern Ireland's institutional landscape.

Table 5: Best practice and lessons from comparative schemes

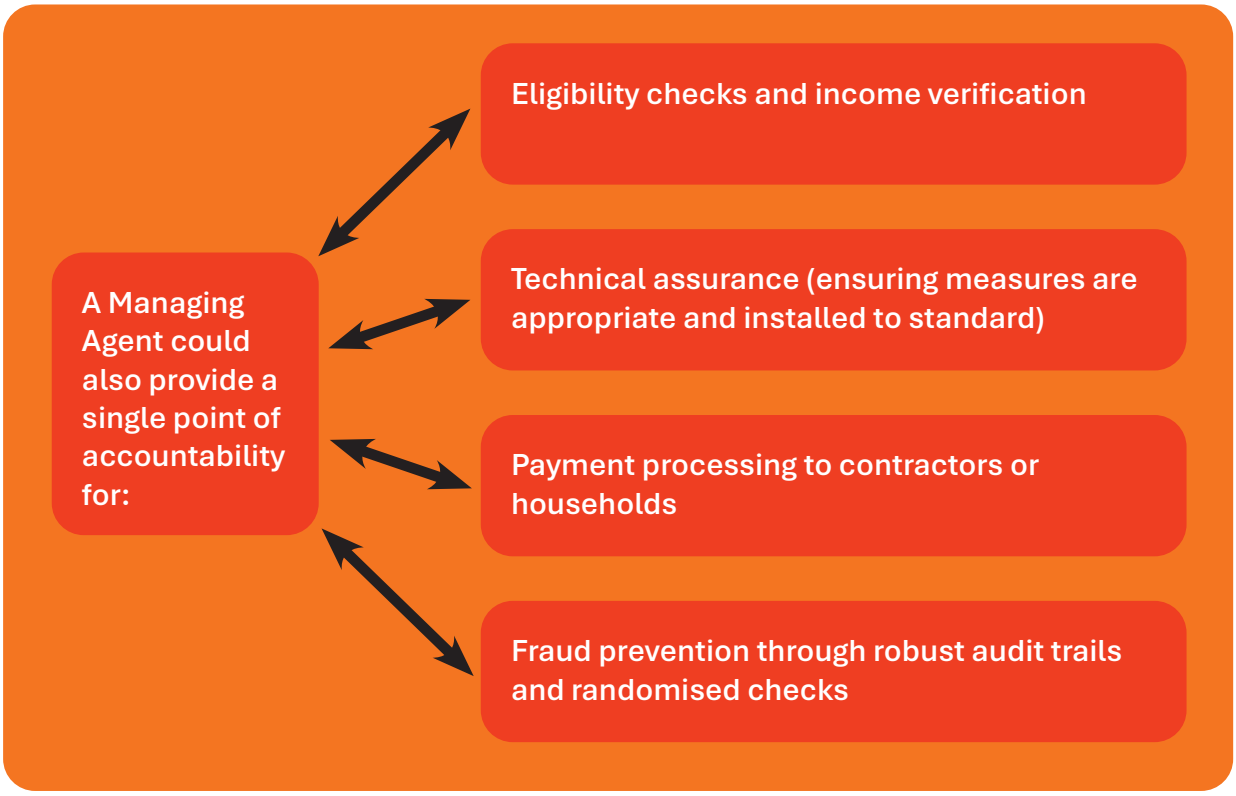
A Managing Agent, appointed through competitive procurement, could be responsible for overseeing programme operations, including:

- Coordinating regional delivery and installer networks
- Managing household engagement and application processes
- Ensuring quality assurance and compliance
- Supporting supply chain development and training
- Maintaining predictable demand through phased rollouts
- Embedding regional balance and supporting microbusiness participation

Together, the grant structure and Managing Agent delivery model could work to achieve DEEHP's strategic objectives, with the grant working to drive uptake of high-impact measures, and the Managing Agent to ensure operational feasibility, regional equity, strong quality assurance and long-term supply chain growth.

3.2 Grant administrator

Administering the grant requires a cost-effective, transparent and fraud-resistant process[38] for eligibility and control checks, quality assurance and payments. Based on experience from similar delivery models, an appointed Managing Agent taking responsibility for grant administration helps ensure consistency, effectiveness and a streamlined experience for households and installers.



While this introduces a step from government to installer and therefore some administrative cost, it supports consumer protection and quality assurance. Centralising payments could also reduce complexity for households and installers.[39] Lessons from the Boiler Upgrade Scheme show that investment in digital systems improves cost-effectiveness of the model.[40] Digitalisation is also essential to streamline processes, reduce costs and error rates, and improve user experience, driving long-term cost-effectiveness. As such, Better Energy Homes, Boiler Upgrade Scheme, and the Home Energy Scotland Grant and Loan Scheme schemes have all evolved digital processes.

38 National Audit Office (2025). Estimating and reporting fraud and error in annual reports and accounts. Good practice guide.
39 Facilitating Retrofit: A comprehensive sectoral analysis UK Green Building Council and the MCS Foundation (2024).
40 Energy Saving Trust (2025). Gap analysis for DfE (unpublished).

3.3 Household eligibility verification

A consistent theme across the benchmarked programmes is delegating verification to a central body, often a Managing Agent, with capacity and expertise to design and deliver robust processes. For example, HES – G&L is delivered by Energy Saving Trust on behalf of the Scottish Government. Successful elements of delivery are detailed below.

Approach	Detail	Example
Proportionate, digital-first verification	Use online portals and clear evidence lists, with helplines for support	HES-G&L and BUS
Flexibility	Accept alternative evidence where standard documents are unavailable	HES-G&L and BEH
Verification timing	Checks can be upfront or after initial engagement, but before funds committed	BUS checks eligibility first; HES-G&L gives advice first; BEH checks before grant approval
Appeals process	Structured process for exceptional cases to ensure fairness	HES-G&L and BEH

Table 6: Successful elements of existing services

The appointed DEEHP Managing Agent could adopt a proportionate approach to verification. It is suggested that two key checks are required:

1. Tenure verification – to confirm the applicant's identity, that they are an owner-occupier and have the legal right to carry out works on the property.
2. Income verification – only where a household applies under Tier 1 (fully funded measures).

DfE could support the design processes by:

- Setting clear expectations in the procurement process that the Managing Agent must balance fraud prevention with accessibility.
- Reviewing and approving the proposed approach to ensure it aligns with programme principles and does not introduce unnecessary barriers for eligible households.

3.4 Measure eligibility verification

Ensuring that only technically suitable and safe measures are installed is essential. Any installation should be based on a proper assessment to confirm feasibility and safety. However, there are sensible opportunities to reduce costs and avoid unnecessary site visits by using digital tools or remote, desktop-based checks to filter out measures that are clearly unsuitable from the outset. This way, on-site assessments can be focused where they're genuinely needed, without compromising quality or safety.

Schemes such as the Home Energy Scotland Grant and Loan and Better Energy Homes use digital assessments and advice services to guide households through retrofit decisions. These approaches are lower cost compared to in-person assessments.

However, both schemes supplement digital tools with in-home assessments for more complex cases. For example:

- Home Energy Scotland Grant and Loan relies on in-home technical specialists in the Home Energy Scotland advice service funded by the Scottish Government to prepare detailed measure recommendation reports where properties present complexity.
- Better Energy Homes has adopted the option of a fully managed retrofit where the 'One-Stop Shop' manages property assessment, funding application and draw down, through to post-works assessment.

This reflects that certain factors, such as property construction and state of repair, or existing heating systems and available space for external units, cannot always be confirmed remotely. In both schemes, there remains the expectation that a suitable on-site assessment is completed by the installer prior to installation.

We would expect the Managing Agent to develop a proportionate, risk-based approach that begins with an initial assessment, such as an RdSAP-based desktop review, to identify feasible measures, supported by basic property information like age and construction type to highlight higher risk scenarios. Installers should always carry out essential checks (e.g. ventilation, electrical system suitability, radiator sizing, heating system compatibility), but higher risk measures, installers, property types or household circumstances should trigger a more detailed assessment route and higher levels of oversight. This ensures funding is focused on appropriate, effective interventions while keeping the verification process cost efficient and robust.

It also provides assurance that measures are technically sound while respecting household preferences where reasonable. Adequate resourcing prevents delay and ensures customer satisfaction.

Encouraging consumer choice

Within the framework of technical recommendations, the DEEHP Managing Agent would need to demonstrate how it encourages households to retain meaningful choice, provided decisions do not compromise safety or performance. For example, the Managing Agent could allow for the following options:

Households may:

- Decline specific measures (e.g. floor insulation due to disruption) if this does not create undue performance risk
- Apply for a subset of measures (e.g. loft insulation only) if technically appropriate because of household budget limitations
- Phase installations, completing some measures initially and returning for others later (subject to programme timelines and budget)

Households should not:

- Receive funding for measures deemed inappropriate by the assessor
- Override technical safety or building standards requirements
- Demand measures without completing prerequisite works (e.g. request insulation before repairing identified damp)



4. Finance model

4. Finance model

DEEHP's finance model will need to ensure affordability, value for money, and equitable access through a mix of public funding and household contributions. Evidence from schemes in the UK and ROI shows this approach is most effective for driving uptake and sustaining delivery. Higher levels of support for lower-income households and partial funding for others, can help ensure maximum uptake.

Funding levels will require market testing for further validation. Digital systems will be critical to support transparent payment processing, financial controls, and fraud prevention. The model is flexible, allowing for adjustments as costs, uptake, or policy priorities evolve.

A full financial model will need to be developed to support a robust and transparent assessment of the programme's affordability and value for money.

4.1 How other schemes have been financed

Better Energy Homes, Boiler Upgrade Scheme, and the Home Energy Scotland Grant and Loan Scheme are directly funded by government, while the Energy Company Obligation is financed by energy suppliers who recover their costs via a levy on customer bills. Better Energy Homes, Boiler Upgrade Scheme, and the Home Energy Scotland Grant and Loan Scheme all require households to fund a portion of the total installation costs. ECO is more varied, where energy suppliers may fund 100% in some cases, or require varying levels of household contribution, in order to deliver their agreed obligations each year. These funding models would need to be considered when designing DEEHP to ensure financial sustainability and equitable access.

4.2 Delivery profile

The DEEHP programme is designed to increase uptake of energy efficiency measures and low carbon heating technologies where appropriate, with a strong focus on reducing affordability barriers for households. This affordability objective works in tandem with the need to support supply chain development and to grow consumer confidence and acceptance over time.

Stakeholders have highlighted the importance of longer-term visibility to help them plan effectively, particularly for developing installer capacity, strengthening supply chains and building household confidence. In response to this, the programme is being framed around a steady, phased ramp-up of activity in the early years, rather than assuming immediate high-volume delivery from the outset.

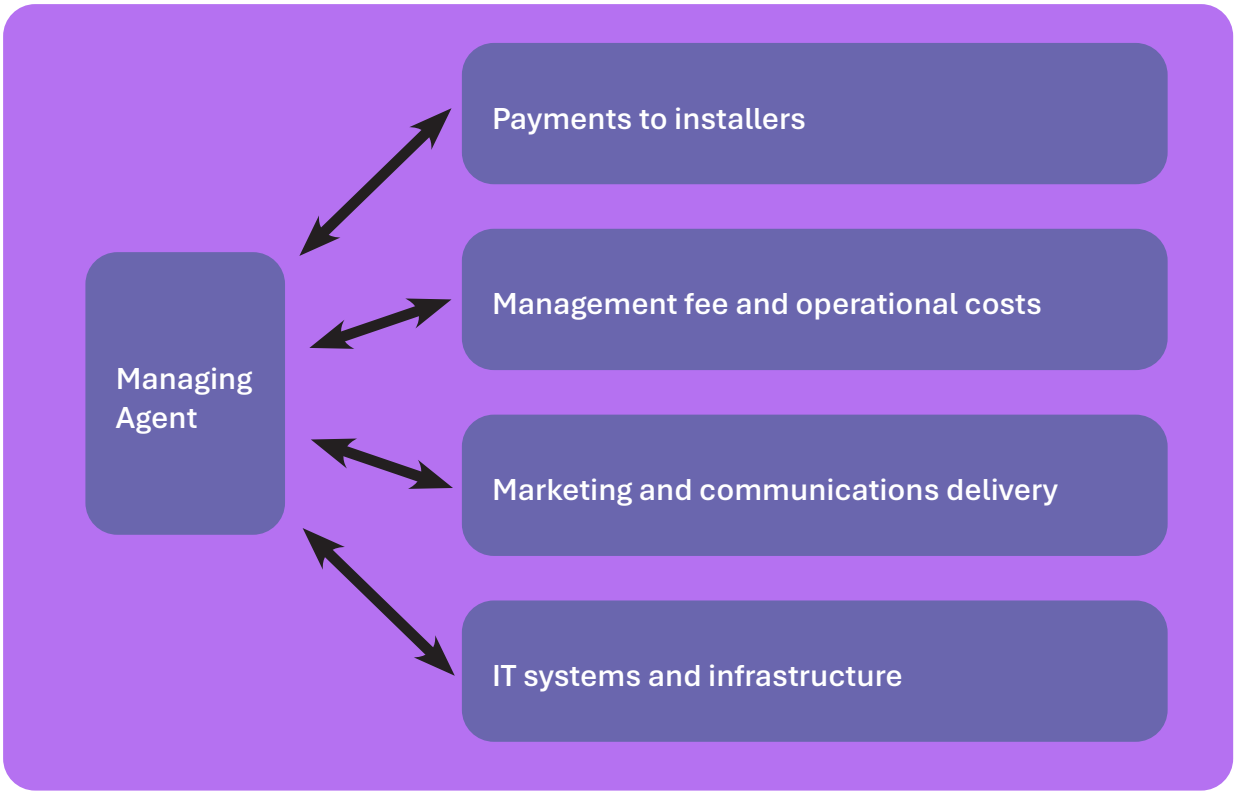
This gradual growth is especially important for clean heating technologies, where both supply chain capability and household demand are expected to develop more slowly. Early years of delivery are therefore likely to focus on measures that can be deployed quickly, reliably and at scale, with heat pump installations increasing as installer expertise expands and market readiness improves.

We also recognise that the early stages of a new programme typically involve higher per-install resource and support costs, as delivery systems, customer journeys and supply chain processes become established. These costs are expected to settle as delivery becomes more efficient and as experience accumulates. Throughout, the programme will remain flexible and responsive, adapting as real-world uptake, market behaviour and operational learning emerge.

The early modelling assumptions will be validated through market engagement, and further financial analysis will follow HM Green Book principles, including inflation, discounting and optimism bias.

4.3 Financial controls and payment processing

DfE would hold the overall programme budget and provide funding to the Managing Agent on a regular basis aligned with the forecast delivery profile. The Managing Agent should hold the operational budget and manage day-to-day expenditure, including:



The Managing Agent would need to provide regular reports to DfE which would be expected to include their spend versus budget, committed and forecast pipeline, regional distribution of spend and any variance explanations. Their finance structure would need to allow for the government to be able to request any deep dive into financial performance at reasonable notice.

4.4 Programme flexibility

An important aspect of the finance model is that it can support a degree of strategic flexibility. This allows the programme to respond to emerging evidence, changing marketing conditions and evolving policy priorities.

Experience from other schemes demonstrates the value of this adaptability. Programmes adjust support as costs fall or policy shifts, e.g. Scottish Government's Home Energy Scotland Grant and Loan removed solar PV incentives as policy priorities shifted, and revised the self-build support after building standard changes.

DEEHP could take a similar approach: drawing on the financial support levels initially estimated, while retaining the ability to test and refine these offers in the early stages of delivery. Aligning financial support with other policy levers, such as building standards, can help maximise the impact of limited public funding.

Successful schemes have used a 'minimum viable product' approach, launching with a core offer and expanding or refining features over time. This does not mean minimal infrastructure: robust systems are essential from the outset to support scale up, future schemes and offer economies of scale. Better Energy Homes, Boiler Upgrade Scheme, and the Home Energy Scotland Grant and Loan Scheme have all evolved their digital application processes over time to improve the customer and installer experience, strengthen audit functions, reduce administrative costs and ensure success from the outset to gain consumer confidence.

With close collaboration between DfE, the Managing Agent and other stakeholders, this approach could enable the programme to test key features, learn quickly and scale up improvements for the benefit of this and other programmes.

In the emerging delivery model, the Managing Agent's role in marketing could be a key lever for supporting regional balance. By monitoring application data and uptake patterns, the Managing Agent could adapt marketing strategies to target underrepresented areas or demographics.

To take a more adaptive approach, the programme could also include:

- Regular performance reviews with a willingness to adjust delivery in response to emerging data
- Customer and stakeholder feedback loops to inform continuous improvement
- Flexibility to refine assumptions made in the business case as the market evolves
- A structured change control process, with clear routes for action, stakeholder engagement, and appropriate sign-off for minor, moderate and major changes

Embedding these principles from the outset would help ensure the programme remains responsive to evidence and capable of delivering sustained impact over time.

4.5 Equality considerations

Ensuring equality in programme design is essential to meet Section 75 obligations in Northern Ireland, requiring equitable access and fair outcomes for all protected characteristics. While DEEHP isn't targeted to the most vulnerable, it should aim to remove barriers and improve outcomes for households across diverse needs, and ensure inclusive access. For example, older people, often hardest hit by high energy costs and inefficient homes, should benefit from multiple ways to access the programme. Digital resources need to meet Web Content Accessibility Guidelines (WCAG) standards, with alternatives such as phone and email available. Awareness will need to be driven through partnerships and targeted marketing. Tiered approach with offers designed to match financial capacity and funds for higher support for lower-income households outside fuel poverty schemes ensures broader participation. Beyond household benefits, increased installation rates will create apprenticeship and skills opportunities, supporting economic inclusion and long-term workforce development.

4.6 Rural needs assessment

It is also critical for the finance model to support solutions that ensure equality of access between rural and urban households. The Rural Needs Impact Assessment[41] highlights that rural households in Northern Ireland face distinct challenges, including older and less energy-efficient housing, reliance on oil heating, limited installer access and a higher proportion of older residents. DEEHP has been designed to address these needs through tailored retrofit measures, targeted outreach, regionally capable installer frameworks, and accessible support options, ensuring rural communities can benefit equitably from the scheme.

4.7 Loans

Loans have been considered as part of the solution to help reduce affordability barriers by spreading upfront costs over time, particularly if offered at low or zero interest rates.

Research across eight European countries 'including the UK' found that access to low-interest loans can increase adoption of retrofit measures, especially for households with limited capital.[42]

However, debt aversion remains a barrier. UK research indicates that most are reluctant to borrow unless it feels essential.[43] Following an interest-free loan pilot, Nationwide concluded that finance alone does not drive demand; it appeals to those already committed to retrofit.[44] For these reasons, and to maintain simplicity and accessibility, DEEHP has not included a loan component in its initial design.

41 DfE (2025). Rural Needs Impact Assessment for the Domestic Energy Efficiency and Heat Programme. (Unpublished).
42 Schleich, Faure & Meissner (2025). Adoption of retrofit measures among homeowners in EU countries: The effects of access to capital and debt aversion.
43 Perspective, Basis Social, London Economics, Cambridge University and University College London for the Department of Energy Security and Net Zero DESNZ (2024). Green Home Finance Expert Analysis from a Behavioural Perspective.
44 Nationwide (2024). How low-cost finance supports the greening of UK homes.



5. Marketing

5. Marketing

Effective marketing is essential to drive uptake and ensure regional balance. Evidence from schemes in the UK and ROI shows that clear, inclusive messaging and multi-channel outreach is critical for engaging target households. Past schemes highlight the need for trusted government branding and accessible information to build confidence.

Based on that evidence, DEEHP could use a mix of online and offline channels to reach owner-occupiers not covered by other schemes. Messaging should emphasise the benefits of energy upgrades, grant availability, and ease of application, tailored to different household segments and regions. Community-based marketing, partnerships with local councils, and case studies of early adopters can help build trust and encourage participation, especially in rural areas.

The marketing strategy should be regularly evaluated and adapted to maximise reach and ensure all eligible households are aware of and able to access the scheme.

The marketing plan for this grant scheme is framed within the context of the findings from user and desk research, to accelerate and scale-up energy efficiency in homes across Northern Ireland. It is suggested that this grant scheme is marketed to all target householders in Northern Ireland through a mix of online and offline marketing channels, to ensure all relevant demographics are reached.

5.1 Scheme name

The scheme's name should feel inclusive, accessible and trustworthy. Feedback from users interviewed for their views on a potential DEEHP suggested many people assume government grants and schemes are restricted to households in receipt of benefits, so it also needs to be clear the scheme is about delivering high-quality, lasting home improvements to householders who can contribute towards them, with income thresholds only for fully funded measures.

A scheme name which avoids mercenary terms such 'energy saving', and instead conveys 'home improvements' or 'smart thinking' is suggested. Examples could include Energy Smart Grant Northern Ireland, Home Energy Grant Northern Ireland, Home Insulation and Heat Pump Grant, Home Energy Booster Grant or Home Energy Support Grant. It is also important to note that the more general words such as 'home energy' and 'home heating' are popular keywords online.

5.2 Branding

Branding plays a central role in how the scheme is understood and accessed by the public. It should clearly communicate the purpose of the scheme and reflect its values. Just like the scheme name, the branding should be inclusive, trustworthy and accessible.

The visual identity, particularly the colour palette, should be carefully considered. Where possible, neutral colours that evoke sustainability may help reinforce the scheme's environmental focus. At the same time, accessibility must be a priority. This includes selecting colours and contrasts that are suitable for people with visual impairments, such as colour blindness, and ensuring compliance with recognised accessibility standards. Potential colours could include those outlined below.

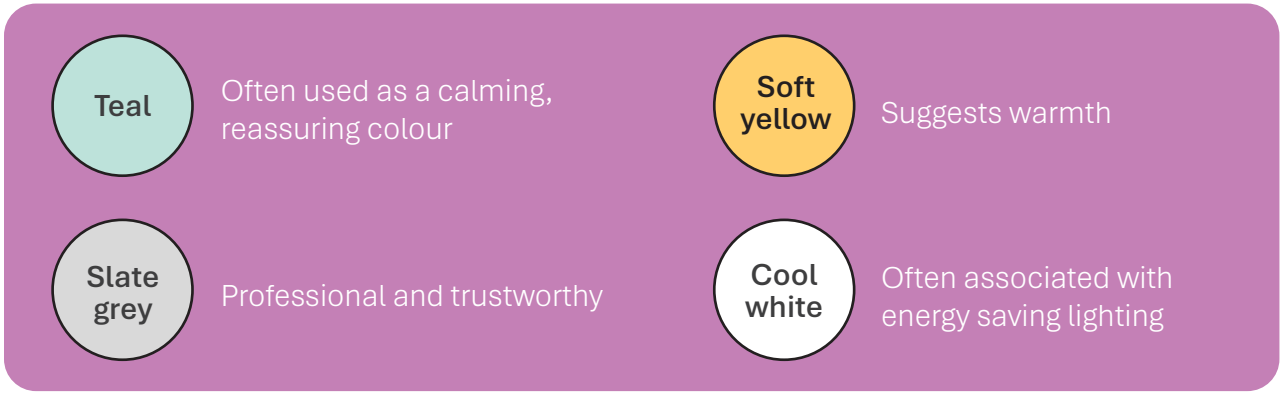


Figure 4: Potential colours and associated experiences

The brand tone of voice is important to consider, especially when talking to such a diverse demographic (i.e. all owner-occupiers in Northern Ireland). Schemes with similar target audiences (e.g. Better Energy Homes) communications are informative, supportive and accessible. DEEHP could consider approaching similarly, ensuring the tone is:

- Reassuring to emphasise trust, simplicity and support.
- Empowering and focus on what householders can do easily (e.g. visit the website, book an assessment).
- Inclusive and use plain English, avoiding technical jargon.
- Optimistic, highlighting key benefits such as energy bill savings, warmth and comfort.

The logo should be easily recognisable and transferable to a variety of collateral, while conveying the key message of the scheme. Other schemes have achieved this in a variety of ways. For example, Better Energy Homes is managed by the Sustainable Energy Authority of Ireland (SEAI), whose logo is clean and modern, with lowercase lettering and a wave motif above the "i", reinforcing a sense of approachability and environmental focus.

DEEHP could consider:

- Having a stylised house with a lightbulb or energy symbol inside as an effective starting point.
- Always accompanying the logo with typography of the brand name for a better association in a clean, sans-serif font.

5.3 Marketing plans and methodology

The marketing strategy will build a recognisable and clearly defined brand aimed at the target audience. Audience segmentation can improve value for money by allowing for targeted, efficient marketing campaigns that improve the return on investment, on top of the scheme's core messaging and call to action. Guidance on this approach is provided by the UK Government's Government Communication Service.[45]

Providing clear guidance and simplicity through messaging can help to drive uptake, providing it adheres some key principles:

- The scheme is visually and tonally distinguished from past and current existing schemes such as NISEP, Affordable Warmth and Boiler Replacement.
- Content uses plain English and adheres to the internationally recognised Web Content Accessibility Guidelines (WCAG) 2.2 level AA, ensuring it's accessible to all eligible customers.
- Equity, diversity and inclusion considerations in all stages of the marketing strategy, including representation in all messaging, visuals and language, and engagement.
- Accessibility considerations in all aspects of the marketing plan, to reach the most diverse audience. For example, using alternative text (alt text) for images and captions on video content.

5.4 Marketing evaluation and KPIs

All communications activity will need to be supported by measurable KPIs and evaluated regularly, measuring the effectiveness of messaging, marketing channels and scheme uptake.

If KPIs are not forecasted to be reached, remedial communication activity and adjustments could be added as required on any poor performing channels. Other schemes have managed this by adjusting marketing budgets, re-allocating the budget from under-performing channels to better performing channels where identified. This marketing strategy, which involves reviewing key performance indicators and adjusting spend across channels, could also support regional balance. A detailed risk analysis could be completed as part of the creation of a marketing campaign plan for this scheme.

45 https://www.communications.gov.uk/guidance/internal-communication/segmenting-your-audience-for-internal-communications/accessed October 2025.

5.5 Consumer awareness and marketing channels

Research conducted for this report found that for many households, energy efficiency and heating system installations are not seen as urgent, partly due to the cost-of-living crisis, suggesting households may now be more financially risk averse. Showcasing the high levels of grant available, financial savings that could be achieved, and the ease of claiming the grant funding and installation could help drive uptake.

A multi-channel marketing approach, tailored to different audience segments, could help ensure broad reach and relevance. Messaging can later be refined over time using A/B testing and audience feedback, allowing the campaign to evolve in response to changing needs and behaviours throughout the life of the programme.

Communication needs to be relevant to target the different audience segments effectively. To succeed, the programme may need to reach audiences through multiple marketing channels, with case studies of early adopters (as varied as possible across house types, locations and ages) being critical for demonstrating success.[46] The user and desk research has identified that the uptake of the scheme will also depend heavily on community-centric marketing channels, including word-of-mouth, installers and evidenced success in smaller communities.

5.6 Regional balance considerations

Achieving a fair regional balance is a key consideration, especially to ensure the more rural areas are not left behind in favour of urban centres. Therefore, it is important to have a good mix of online and offline messaging tailored to both rural areas and urban centres, supported by trusted networks. Identified as part of research undertaken for this report, Northern Ireland's highly interconnected society values local networks strongly, and word of mouth has been identified as carrying more weight than ads or media.

This suggests community engagement is likely a key component of this scheme by increasing awareness of low carbon home heating measures, such as heat pumps, at roadshows, local community events and through local installers. New customer research will inform the messaging further and ongoing desk research will support the regional strategy throughout the scheme's period.

5.7 Requirement for analysis for a full marketing plan

A full marketing situation analysis will need to be completed by the Managing Agent, prior to the creation of a marketing campaign plan for this scheme. It will include considerations around the need to target rural and harder to reach communities as a priority, along with households just above eligibility thresholds for other schemes, to ensure this scheme achieves balance across all regions, audience segments and urban and rural households. It should take into account and align with other schemes and advice. Customer research can be used to refine customer personas, based on a wider sample size of residents in Northern Ireland.

46 Retrofit Revisit: Revealing crucial lessons for future retrofits: EGIS Architecture and CIBSE (2024)



6. Digital process

6. Digital process

Delivery of previous schemes highlight that integrated digital systems improve application speed, reduce errors, and strengthen financial controls. A digital-first approach should be central to DEEHP's delivery, to support efficient, transparent, and user-friendly scheme administration.

DEEHP could use a suite of digital tools to enable streamlined eligibility checks, payment processing, and fraud prevention, while ensuring accessibility. At the same time, digital inclusion measures, such as assisted phone support and compliance with accessibility standards, would ensure no eligible household is excluded.

The digital process would need to be able to adapt to support scale, improve user experience, and maintain robust data security.

A digital-first approach will ensure efficient, transparent, and customer-friendly delivery of DEEHP. By leveraging an integrated suite of digital tools the programme can streamline operations and support a high-quality service.

6.1 Core digital infrastructure

To deliver a seamless end-to-end customer experience and robust back-office management, the programme could benefit from the following digital components:

Component	Detail	Features
Programme website/ user portal	Main public interface for information and applications; document management	Eligibility checking, application tracking
CRM system	Customer interactions, workflows, and data storage	Application stage tracking, reporting
Installer portal	Portal for installers to manage jobs, submit documents, and track progress	Digital scheduling, performance data
Payments system	Automates payments to installers with controls for fraud prevention	Dual authorisation, customer satisfaction
Telephony system	Handling customer enquiries, integrates with CRM, supports quality assurance	Call recording analytics

Table 7: Potential digital components

The Green Finance Institute, established by UK Government to mobilise sustainable finance for net zero, published a comprehensive report (Building Renovation Passports: Creating the pathway to zero carbon homes[47]) outlining a framework for Building Renovation Passport (BRPs) in the UK. These passports could include:

- A digital logbook of property data
- A long-term renovation roadmap
- Links to contractors and finance options.

The report highlights BRPs as a potential route to overcome barriers such as poor data, low awareness, and fragmented supply chains, helping homeowners make informed decisions and unlocking retrofit investment. However, building this is considerable work e.g. EU-wide Demo Blog project.[48] A CRM integrated with user interface, and an EPC certificate base is a good basis to build towards a full passport.

6.2 Digital customer journey

The customer journey is outlined below.

Stage	Activity	Key feature
Awareness to enquiry	Householders discover programme, eligibility, & enquire	Programme, eligibility and contact information
Application to assessment	Applicants create account, submit forms, book assessment	Online forms, document upload, automated reminders
Specification to contract	Installer allocated, quotes and contracts managed online	Digital quotes, e-signature, secure payments
Installation to completion	Quality checks, customer sign-off, completion and payment	Mobile checklists, digital certificates

Table8: Customer journey

6.3 Digital inclusion

The programme's customer journey would be predominantly digital, with provisions to ensure no householder is excluded.

- **Multi-channel support:** While the majority of initial enquiry and application interactions are expected to occur online, there is an expectation that some enquiries or applications may need to be either partially or completely supported via phone. A dedicated helpline staffed by trained advisors will provide assisted digital support with applications.
- **Accessibility:** The website and portals will comply with WCAG 2.1 AA standards, use plain English, provide adjustable text sizes, include subtitles on videos, and offer alternative formats (large print, audio, Braille) on request.

47 Green Finance Institute (2021). Building Renovation Passports: Creating the pathway to zero carbon homes.
48 Demo-BLog is a four-year Horizon Europe funded project aimed at bringing together and further developing Digital Buildings Logbooks (DBLs) in Europe. www.demo-blog.eu



7. Quality assurance

7. Quality assurance

DEEHP places quality at the centre of scheme design, recognising that poor installations undermine consumer trust and programme impact. Robust standards, independent inspections, and clear consumer protection are essential to achieve this.

The Managing Agent would be responsible for a comprehensive quality management framework. This includes rigorous installer accreditation, requiring technical certification and a proven track record. Risk-based inspections could be carried out by independent Quality Managers, with higher inspection rates for complex or high-risk measures like heat pumps and solid wall insulation. All installations would need to comply with British or European standards, and installers must provide documentation and warranties. Customer satisfaction should be monitored through surveys at, and after, completion, and a clear complaints process will be in place, with adequate escalation routes.

The aim of DEEHP is to encourage adoption of more energy efficiency and low carbon heating measures in households across Northern Ireland. While many consumers report clear benefits from installing these measures, there is a risk that poor-quality installations could lead to negative experiences. As uptake increases, maintaining high standards and safeguarding consumer trust will be increasingly important.[49]

Quality should therefore be central to DEEHP's design, underpinning every aspect of delivery to ensure technical excellence, customer satisfaction and strong reputational standards. A focus on quality is likely to have cost implications. However, this approach reflects stakeholder feedback for stronger consumer protections, and aligns with user research conducted for this report, which highlights the importance consumers place on trust and reliability.

To balance the focus on quality with value for money, the programme may consider the following:

- **Administrative efficiency vs. thoroughness:** Risk-based inspection frequencies and digital tools could help optimise Quality Manager (QM) resource allocation without compromising standards.
- **Speed of delivery vs. regional balance:** Accreditation quotas and workload monitoring may help prevent quality dilution in high-demand areas and support equitable access across regions. Timelines for monitoring must allow industry time to build capacity, particularly for technologies with known supply-chain gaps (i.e. heat pumps)
- **Cost implications:** Quality assurance activities are expected to require dedicated funding. Additional inspections or remedial works may be supported through contingency arrangements, where appropriate.

49 Stakeholders views; Citizens Advice (2024). Hitting a Wall: Protecting consumers who install net zero technologies.

7.1 Quality standards for installations

7.1.1 Certification

To guarantee high technical performance and compliance with regulatory requirements, it would be necessary that all measures adhere to rigorous standards:

- **Technical certification:** Installers must hold relevant certifications (e.g. MCS for heat pumps, and compliance with Building (Amendments) Regulations (Northern Ireland) 2022)[50] and adhere to guidance on the use of energy efficiency and sustainable energy measures.
- **Material and workmanship:** Only materials and products meeting British or European standards may be used. Installers may need to provide product datasheets and warranty documentation.

The National Audit Office (NAO) investigation[51] into the quality of installations funded under ECO4 and GBIS has recently reported. The main conclusion was that the quality process had to be simple, easy to explain and therefore adhere to and manage. That principle of simple robustness would be best applied to DEEHP.

7.1.2 Installer accreditation requirements

Maintaining a skilled and accountable workforce is vital. Framework installers would need to demonstrate a proven track record, with evidence of completed projects and satisfactory customer feedback. Minimum turnover and insurance requirements will apply. While subcontracting is permitted, primary contractors on the installer framework need to remain fully responsible for quality and customer satisfaction, meaning they should only engage reputable local partners. This approach enables smaller businesses to participate while maintaining the assurances provided by larger organisations.

A framework document established by the Managing Agent could help ensure that expectations for installers are clearly defined and consistently applied. The approach used by the Northern Ireland Sustainable Energy Programme (NISEP) in its 2025–2027 Framework Document[52] offers a useful reference point for how this might be structured in practice.

7.1.3 Quality assurance processes

A comprehensive quality management framework could balance thoroughness with administrative efficiency – this could entail:

- **Risk-based inspections:** Quality Managers (QMs) appointed by the Managing Agent could conduct pre- and post-installation inspections. Projects would be categorised by complexity and risk, determining inspection frequency - ranging from spot checks on simple jobs to multiple visits for whole-house retrofits.
- **Customer perception surveys:** QMs could administer short satisfaction surveys at project completion, assessing communication clarity, tidiness of work and user understanding of new technologies (e.g. heat pump controls).
- **Administrative streamlining:** Digital inspection checklists and photo uploads could reduce paperwork and travel time. QMs would then resolve minor issues on-site, escalating systemic problems to the Managing Agent's quality team.

50 Building Regulations (Amendment) Regulations (Northern Ireland) – Act of the NI Assembly (2022). This legislation came into effect on April1 and June 30, 2022 and includes amendments to The Building Regulations (Northern Ireland) 2012.
51 Energy efficiency installations under the Energy Company Obligation
52 Utility Regulator Framework Document for the Northern Ireland Sustainable Energy Programme 2025-2027

7.1.4 Energy Performance Certifications

Energy Performance Certificates (EPCs) are widely used across the UK and Europe for identifying potential efficiency improvements and verifying that retrofit measures are likely to deliver benefits. Recent reforms proposed by the UK Government aim to improve the accuracy, relevance and usability of EPCs.[53]

EPCs can serve as a benchmark for building fabric performance, especially when behavioural factors are excluded. They are actively used to:

- Guide investment decisions and inform retrofit planning, especially in local authority, social housing and housing association contexts.[54] For example, the Northern Ireland Housing Executive's retrofit pilot used pre- and post-retrofit EPCs to assess the impact of different energy efficiency measures across five homes. The results informed future retrofit strategy and demonstrated significant improvements in SAP scores, carbon emissions and heat loss.[55]
- Determine grant eligibility, as seen in schemes like the Energy Company Obligation (ECO4) and Great British Insulation Scheme (GBIS), which target homes with EPC ratings of D to G.[56]

EPC reform is expected to introduce a new multi-metric framework under the Home Energy Model (HEM), replacing the current single rating with separate assessments of key aspects of home performance. These include:

- Fabric performance: the thermal efficiency of the building envelope and its heat demand
- Heating system: the efficiency and carbon intensity of the primary heating system
- Energy cost: an estimate of annual energy running costs
- Smart readiness: the capacity of the home to integrate with smart technologies and flexible energy systems

This approach provides a more transparent and comprehensive view of energy performance, allowing carbon, cost, and smart functionality to be considered independently rather than combined into a single score. As reform is expected to begin in late 2027, there will be a period of overlap with the current EPC framework. However, the scheme is expected to align primarily with the new HEM metrics, with implications for how outcomes and eligibility are defined.

As part of a performance verification strategy, EPCs could help ensure that proposed measures are aligned with expected energy savings and document the presence of those measures in a public database, supporting housing stock analysis. When combined with other tools, such as technical suitability surveys and property condition assessments, EPCs could contribute to a more robust understanding of building performance and support quality assurance in retrofit programmes.

53 UK Government (2024). Consultation -Reforms to the Energy Performance of Buildings regime.
54 Local Government Association, (2023) Local Authority Domestic Retrofit Handbook, 2023 Edition
55 Northern Ireland Housing Executive (2018). Journey to Retrofit.
56 Ofgem ECO4 and GBIS Eligibility Requirements (2023)

7.2 Consumer protection mechanisms

As explored earlier in this report, consumer protection is essential to building public trust and ensuring householders feel confident and supported throughout the retrofit process. To translate this principle into practice, the following mechanisms could be considered to help identify and resolve issues promptly and fairly:

- **Warranties and guarantees:** All installations could be backed by an appropriate workmanship guarantee.
- **Complaints handling:** A straightforward and accessible complaints process could be managed by the programme's Managing Agent. This approach could initially give the installer an opportunity to resolve any issues directly with the householder. However, incorporating clear and transparent escalation routes, such as referral to the Managing Agent, or DfE in exceptional cases, could provide additional reassurance to households and help maintain confidence in the programme.
- **Redress and remedies:** In cases of installation failure the programme could provide funding for necessary remedial works at no additional cost to the householder. Payment to installers may be withheld until issues are satisfactorily resolved, helping to ensure accountability and maintain quality standards.

7.3 Performance monitoring

Embedding a culture of learning and adaptation can help drive long-term success.[57] To support this effort, the Managing Agent could establish feedback loops to ensure QM and installers learn from completed jobs, both technically and from customer service experiences. The Managing Agent may also need to consider emerging technologies and materials to ensure the programme adopts best-in-class solutions, understanding the technical competence of installers required and updating inspection protocols where necessary.

57 Itcon (2024). Enhancing Building Sustainability: A Comprehensive Review and Methodological Roadmap for Retrofit Strategies.



8. Indicative roadmap and Conclusions

8. Indicative roadmap

DEEHP's delivery should follow a phased approach to allow for sufficient planning, testing, and scaling. The roadmap should begin with mobilisation and procurement of a Managing Agent, followed by development of digital systems, installer framework, and marketing materials. Initial rollout should focus on early adopter households and priority measures, with capacity ramping up over the first five years.

Regular performance reviews and stakeholder feedback will be needed to inform adjustments to grant levels, eligibility criteria, and delivery processes. As the scheme matures, lessons learned should be used to refine operations and support continuous improvement. Planning for scheme closure or transition to successor programmes needs to be built in to ensure a smooth wind-down and knowledge transfer.

Delivering the DEEHP may benefit from a phased approach that allows for careful planning, testing and scaling. The indicative roadmap below assumes that a full business case has been completed and approved before mobilisation begins.

The roadmap is a guide, not a fixed plan. It provides an indicative sequence of activities and sense of direction while recognising that timelines and activities may evolve as consultation and design work progress.

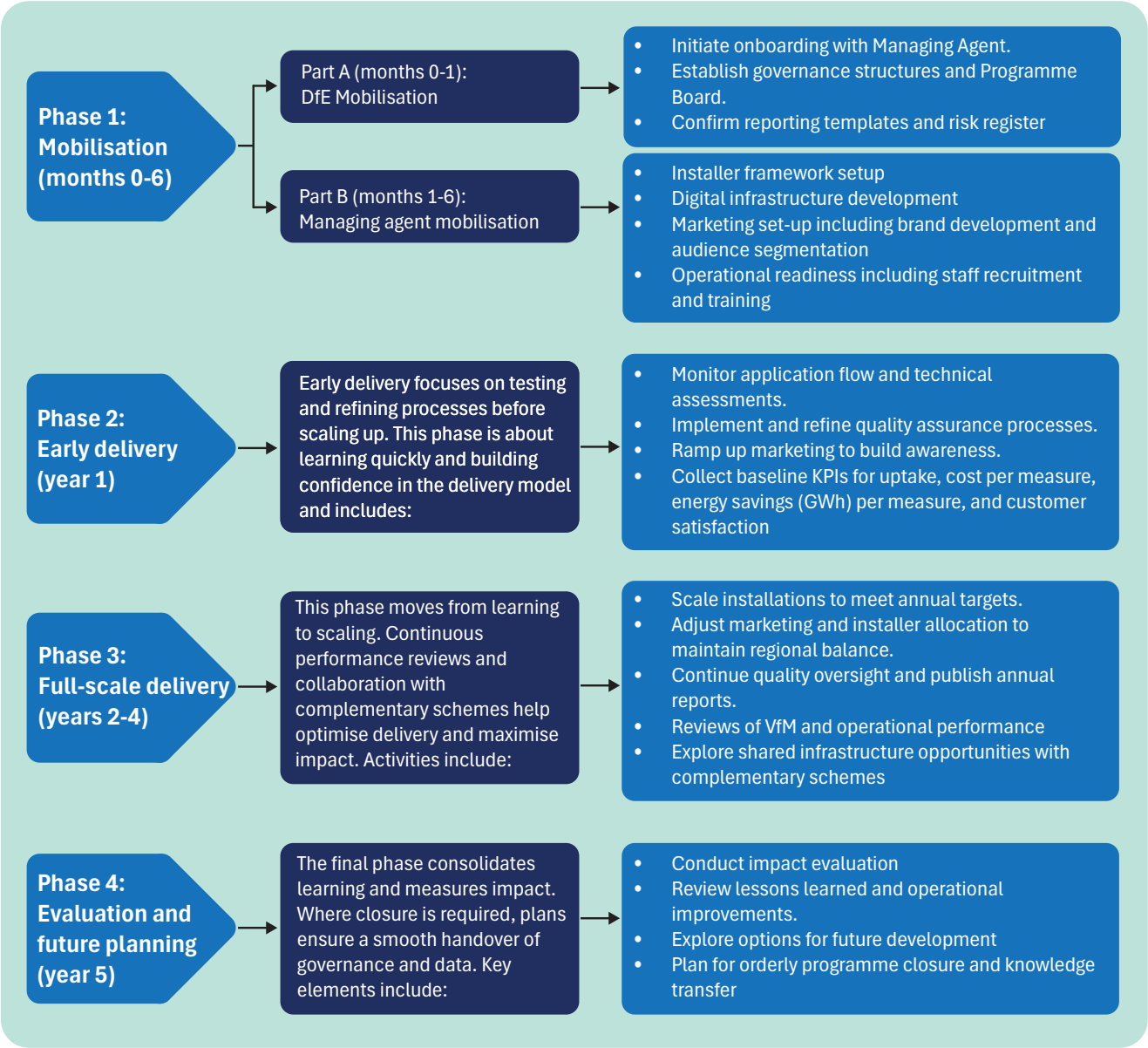


Figure 5: Indicative roadmap for establishing DEEHP

As the programme matures, DfE and other delivery partners should plan for how it might eventually conclude. Early planning could help ensure a smooth and orderly wind-down or transition into the next phase or successor scheme. Depending on the route agreed, this might involve considering how and when to communicate final application deadlines, how to manage the completion of pipeline installations and how to reconcile any outstanding financial matters. There may be steps needed to close out contracts, complete final evaluations, transfer knowledge and archive data securely. Taking a thoughtful and phased approach to closure planning can help avoid disruption, ensure continuity of learning and support a responsible end to the programme.

9. Conclusions

The presented emerging model for the Domestic Energy Efficiency and Heat Programme (DEEHP) is intended as an evolution of existing retrofit schemes in Northern Ireland. The approach builds directly on best practice and lessons learned from previous local delivery, as well as evidence from comparable programmes in the UK and ROI. The report is designed to stimulate consultation and invite feedback from stakeholders to ensure the scheme is robust, equitable, and fit for purpose.

The emerging model could address a significant gap in current provision by targeting owner-occupiers who are not eligible for fuel poverty or social housing schemes, a group critical for meeting carbon reduction targets but often held back by affordability barriers. Evidence from schemes in the UK and ROI demonstrates that a centrally managed, grant-based approach can drive uptake in that group, if it is matched by robust quality assurance, clear eligibility rules, and effective consumer engagement.

The Managing Agent model, tiered grant structure, and integrated digital systems represent a step forward from current practice, aiming to address known gaps and challenges in scheme administration, consumer protection, and delivery efficiency. These emerging design directions, with particular attention to eligibility rules, grant levels and quality assurance, will be further refined based on the inputs of public consultation.

Digital systems presented are critical for efficiency and transparency and have been matched by accessible support for digitally excluded households. Quality assurance solutions presented are intended to be rigorous yet balanced. Marketing and outreach approaches suggest proactive and regionally balanced models, drawing on trusted networks and tailored messaging. The financial model presented is robust and recognises need for market testing and ongoing refinement. Finally, the indicative scheme's phased roadmap provides a structure for mobilisation, scaling, and eventual wind-down to be revisited as delivery progresses.

In conclusion, DEEHP represents a significant opportunity to deliver carbon savings, improve housing quality, and support the transition to low-carbon homes. Its success will depend on sustained commitment to quality, transparency, and adaptability, as well as close collaboration between government, delivery partners, and the wider supply chain. This consultation as well as ongoing evaluation and stakeholder engagement will be essential to ensure the scheme delivers its intended impacts.

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