

National Home Energy Upgrade Scheme

R290 High Temperature Heat Pump Pilot

Operational Guidelines

Version 1.1



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1. Introduction

This document provides an operational overview of the R290 High Temperature Heat Pump (HTHP) Pilot delivered via the National Home Energy Upgrade Scheme (NHEUS). This document should be read in conjunction with the National Energy Upgrade Scheme Guidelines.

2. Pilot objectives

This pilot is aimed at installing high temperature heat pumps (HTHP) in 100 homes to evaluate system performance, energy use, indoor comfort levels and heating patterns. This data will also help to assess the overall efficiency, running costs and performance of HTHPs for different home types. The operational performance and costs data will be compared to pre-heat-pump fossil fuel heating energy usage, where possibly, providing evidence to inform future policy and grant schemes.

3. Homes suitable for the pilot

The pilot is particularly interested in:

- Homes with higher heat loss that may not currently qualify for existing heat pump grants.
- Older homes where high temperature operation could reduce the need for extensive upgrades.
- Homes built and occupied before 2011.
- Homes installing a HTHP with R290 refrigerant (propane).
- Broadband availability

4. Pilot duration

It is expected that applications will be accepted, through the One Stop Shop portal, for a period for 9 months, so that operational performance can be monitored over the 2026/27 heating season providing sufficient evidence to inform future decisions.

5. What is a high temperature heat pump

Market trends and technology development show that most heat pumps sold in the next five years are expected to be high temperature capable.

A high temperature heat pump works in the same way as any other heat pump but delivers heat at a higher temperature that can be used in existing central heating systems at similar efficiency. HTHPs can deliver boiler like temperatures so many homes may be able to move to this technology without the expense of a fabric upgrade and changing existing radiator systems. However, upgrades may still be recommended if radiators are undersized and the home has very high heat losses. One Stop Shops can advise on the overall design.

This pilot specifically supports HTHPs with R290 (propane) as a refrigerant, enabling higher flow temperatures, as advised by the manufacturer. R290 can absorb more energy from the air outside and uses less energy to extract heat and so is more efficient at the transfer of heat to the distribution pipes than older refrigerants.

6. Eligible Grants:

The HTHP grant, and other energy efficiency measure grants, if specified, will be administered through the One Stop Shop portal. Grant amounts will align with the NHEUS grant values, including the heat pump bundle grants in the table below.

Measure	Grant
Heat pump system	Up to €6,500
Upgrade works required to Central Heating components i.e. new radiators or underfloor heating,	Up to €2,000
Renewable Heat Bonus for upgrading to a Heat Pump.	Up to €4,000

One Stop Shops cannot claim in excess of their costs incurred.

7. Requirements

Application administration, processing and grant levels will align the existing NHEUS programme. Pilot specific exceptions and clarifications are outlined below.

General requirements

- **One Stop Shop:** The HTHP pilot is only open to Client's who apply through registered OSSs completing work under the NHEUS.
- **Application and Payment:** The application and payment will be through the current OSS online web portal, which is accessible to OSSs throughout the year. OSSs must advise joao.andrade@seai.ie, stephen.farrell@seai.ie and graham.allen@seai.ie of applications receiving an R290 HTHP so the system can be updated to indicate participation.
- **Traditional Homes Pilot:** Traditional homes are eligible to participate.

Works requirements

- **Minimum Energy Uplift:** There is no requirement to meet the 100kWh/m²/year primary energy uplift.
- **Pre Work BER:** While a pre-work BER is required to be published a specific rating is not required.
- **Post works BER:** No post works BER requirement.
- **Heat Loss Indicator:** The heat loss indicator (HLI) is not required to determine grant eligibility. HTHP suitability is determined by the designer, installer and manufacturer.
- **Pre work energy usage:** OSS will be asked to request documentation from homeowners supporting electrical and gas / oil usage, for 12 months prior to the HTHP installation and 12 months electrical usage post installation, for the purpose of research and HTHP performance evaluation.
- **HTHP cloud-based performance data:** Homeowners and manufacturers should be requested to provide cloud-based data linked to the operational performance of the heat

pump. OSSs will be requested to get a pilot specific data consent form signed by the homeowner prior to participation. OSSs to ensure the manufacturer has the capability of recording performance data in their cloud-based platform and should liaise with the manufacturer to confirm data is being received.

- **Space heating (DEAP main space heating efficiency):** The pilot will help to understand the impact of HTHPs on achieved space heating efficiencies calculated in DEAP. Flexibility on this efficiency and other heating system parameters will be provided, where appropriate, to evaluate the impact on HTHP published eco-design performance data on the calculated space heating efficiency in DEAP.
- **Standards:** The OSS must ensure compliance with all relevant technical guidance, including SEAI's Domestic Technical Standards and Specifications ("DTSS"), manufacturers guidelines, and current Building Regulations.

8. Document History

Revision	Date	Reason for change	Change Owner
1.0	03/02/26	R290 HTHP Operational Guidelines	SF
1.1	01/03/2026	Removal of B2 post work requirement. 12month energy consumption documentation. Clarity on HTHP performance data collection from manufacturers. R290 HTHP email notification once an application is made.	SF

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