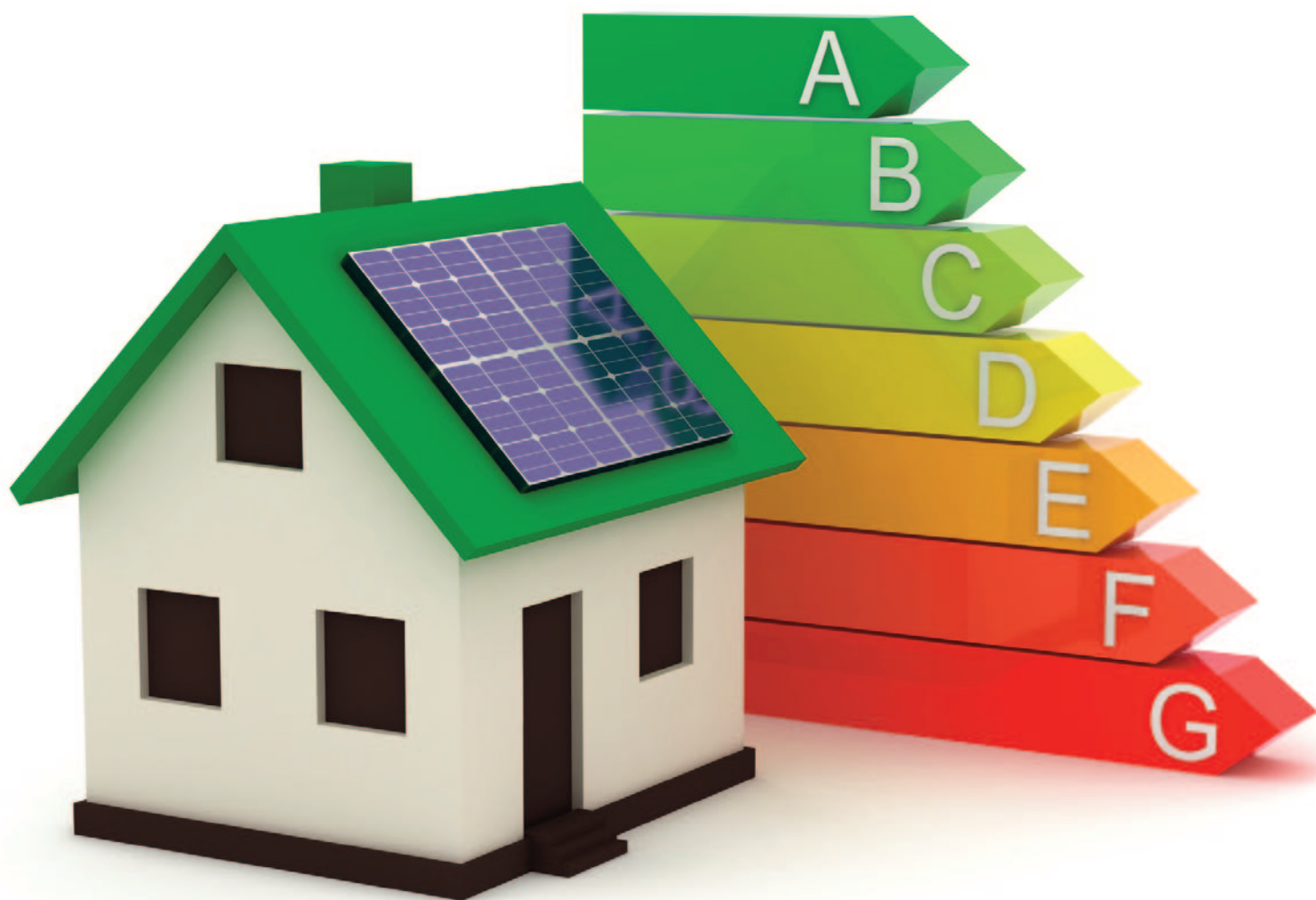


SAVING MONEY



SAVING ENERGY



# Energy Company Obligation (ECO4) HOMEOWNER GUIDE



Scan to Apply



[menai.co.uk](https://menai.co.uk)



# Contents

About Us	3
What is the Energy Company Obligation (ECO4?)	4
Grants Available	4
HHCRO Eligibility	5
Flexible Eligibility	6
Whole House Approach	8
Why Insulate?	9
Energy Efficiency	9
First Time Central Heating - Mains Gas	10
First Time Central Heating - Air source Heat Pump	11
Boiler Upgrade	13
Heating Controls	13
High Heat Retention Storage Heaters	14
Internal Wall Insulation	16
Room in Roof Insulation	18
Cavity Wall Insulation	20
Loft Insulation	22
Suspended Floor Insulation	23
Solar Photovoltaics (PV)	24
Ventilation	25



# About Us

---



Menai Heating was founded in 2001 originally as a plumbing and heating services company. At the forefront for Renewable technologies, we started in 2005 installing solar thermal with solar photovoltaics, heat pumps and biomass boilers being installed in the following years. After discovering the Energy Company Obligation Scheme in 2015, our ambitions changed to do our part in eradicating fuel poverty, lowering the UK's carbon footprint and provide our customers with warmer homes. We work on behalf of homeowners, landlords, councils, and tenants in delivering heating, renewable and insulation measures.

All our employees, contractors and sub-contractors of engineers, installers and surveyors have all undertaken the highest levels of training to ensure they reach our customer expectations. All our accreditations can be found at the back of this booklet for more information.

All measures are completed in full compliance with the PAS 2035 frame work, ECO4 guidance and building regulations.



# What is the Energy Company Obligation (ECO4)?

---

The Energy Company Obligation (ECO) is a government energy efficiency scheme in the UK that requires larger energy suppliers to provide funding for energy efficiency measures in the domestic housing sector (owner occupied and private rentals). The scheme aims to reduce carbon emissions and tackle fuel poverty by improving the energy efficiency of homes and reducing energy bills.

ECO is currently in its fourth phase (ECO4), which began in July 2022 and is set to run until March 2026. The fourth phase focuses on supporting low-income and vulnerable households, as well as those living in harder-to-treat properties, such as solid-walled homes.

Under the scheme, energy companies are required to provide funding for a range of energy efficiency measures, such as insulation, heating, heating upgrades, and renewable technologies. Eligibility criteria for funding varies depending on the type of measure, the type of dwelling and the circumstances of the household occupants, which generally includes factors such as income, benefit recipients, health conditions, and/or energy usage. There are two routes to qualify through: flexible eligibility or HHCRO (Home Heating Cost Reduction Obligation).

The scheme is regulated by Ofgem, the UK's energy regulator, and is part of a wider government strategy to transition to a low-carbon economy, meet climate change targets and bring vulnerable people out of fuel poverty.



## Grants Available

---

- Air source heat pump
- High heat retention storage heaters
- Cavity wall insulation
- Internal wall insulation
- External wall insulation
- Loft insulation
- Room in roof insulation
- Solar photovoltaics (PV)
- Underfloor insulation
- Mains gas central heating
- Smart heating controls
- Boiler upgrades
- Ventilation upgrades

# HHCRO (Home Heating Cost Reduction Obligation) Eligibility

Under the HHCRO scheme, larger energy suppliers are obligated to provide funding for energy efficiency measures in qualifying households. These measures are aimed at reducing the cost of heating homes and improving energy efficiency.

Eligibility for funding through HHCRO is based on whether any person living in the dwelling receives one or more of the following qualifying benefits:

- 1) Income based Jobseekers Allowance (JSA)
- 2) Income related Employment and Support Allowance (ESA)
- 3) Income Support (IS)
- 4) Pension Credit Guarantee Credit (PCGC)
- 5) Working Tax Credit (WTC)
- 6) Child Tax Credit (CTC)
- 7) Universal Credit (UC)
- 8) Housing Benefit
- 9) Pension Credit Savings Credit (PCSC)



However, if any person living in the dwelling does not receive any of the above qualifying benefits, the occupier may still be able to qualify for energy efficient measures through the flexible eligibility scheme.



# Flexible Eligibility

---

The Flexible Eligibility (FLEX) scheme is a part of the Energy Company Obligation (ECO) 4 in the UK, which allows local authorities to identify households that are eligible for energy efficiency measures under the scheme.

The local authorities can then refer these households to energy suppliers to receive funding for energy efficiency measures.

The FLEX scheme is designed to be flexible, allowing local authorities to define their own eligibility criteria based on local needs and priorities. This can include households on low incomes, those living in specific types of properties, or those with health conditions that are made worse by living in a cold home.

Being based in North Wales, the main local authorities we work with are Anglesey County Council and Gwynedd Council. These two local authorities have the same qualifying process for the flexible eligibility route, and it is as follows:



CYNGOR SIR  
YNYS MÔN  
ISLE OF ANGLESEY  
COUNTY COUNCIL



# Eligibility Criteria

To qualify, properties must be an occupied private domestic premises (either owner-occupied homes or private rented sector homes). Both the property and the household must adhere to at least one of the three available routes outlined below:

**Route 1:** EPC/SAP bands D-G owner occupied households and private rented sector E-G band households with a gross income less than £31,000. This cap applies irrespective of the property size, composition, or region.

**Route 2:** EPC/SAP bands E-G for owner occupied households and private rented sector households that meets a combination of two of the following proxies:

Proxy 1) Homes in Welsh provision Lower-layer Super Output Areas 1-3 on the Welsh Index of Multiple Deprivation 2019.

Proxy 2) Householders receiving a Council Tax reduction (reduction based on low income only).

Proxy 3) Householders vulnerable to living in a cold home as identified in the National Institute for Health and Care Excellence (NICE) Guidance. Only one from the list can be used, excludes the proxy 'low income'.

Proxy 4) A householder receiving free school meals due to low-income.

Proxy 5) A household referred to the LA for support by their energy supplier or Citizen's Advice because they have been identified as struggling to pay their electricity and gas bills.

**Route 3:** EPC/SAP bands D-G owner occupied households and private rented sector E-G households that have been identified by their doctor or GP as low-income and vulnerable, with an occupant whose health conditions may be cardiovascular, respiratory, immunosuppressed, or limited mobility related.

\* Note proxies 1 and 3 cannot be used together.

\* Note EPC abbreviates to Energy Performance Certificate

\* Note SAP abbreviates to Standards Assessment Procedure

All local authorities that are part of the flexible eligibility scheme may have differed qualifying criterias. Please refer to your local authorities for more information.



# Whole House Approach

The Whole House Approach refers to the strategy that must be followed under ECO4 for improving energy efficiency, sustainability, and overall environmental performance of a residential building, not just one element.

Instead of focusing on offering single measures to a dwelling, the whole house approach considers the entire home and looks at every possible measure we can install in the home instead of just a singular measure. The key principles of the Whole House Approach include:

## Energy Efficiency

The whole house approach emphasizes reducing energy consumption by optimizing insulation, air sealing, and ventilation systems. This involves improving the thermal performance of the building envelope, upgrading windows and doors, and utilizing energy-efficient appliances and lighting.

## Indoor Air Quality

A crucial aspect of the whole house approach is ensuring good indoor air quality for occupants. This involves proper ventilation and filtration systems to remove pollutants and controlling moisture levels to prevent mold and mildew growth.

## Renewable Energy Integration

The whole house approach encourages the integration of renewable energy technologies to reduce reliance on fossil fuels and decrease the carbon footprint of the building such as air source heat pumps and solar photovoltaics.

## Our take

When an assessment is carried out by one of our qualified surveyors, we will look at every possible measure your home qualifies for under the ECO4 scheme and do what we can to ensure that all of the measures are installed, your heating bills go down and the energy efficiency of your home goes up.



# Why Insulate?



- Insulation can significantly reduce heating and cooling costs by keeping the home at a consistent temperature which also makes the home more comfortable to live in.
- Insulation can improve indoor air quality by reducing drafts and air leaks.
- Insulation can help to prevent moisture and mould growth by reducing condensation.
- Insulation can increase the overall energy efficiency of a home, reducing the amount of carbon emissions produced, making it more environmentally friendly.
- Insulation can also increase the overall value of a home.
- Insulation can help to reduce the amount of dust and allergens that enter the home, creating a healthier living environment.
- Insulation can be an affordable and cost-effective way to improve the energy efficiency of a home.

**In summary, insulating your home can bring many benefits such as energy savings, comfort, improved indoor air quality, increased property value, environmental benefits and more.**

**It is an important step in making a home more energy efficient and comfortable to live in.**

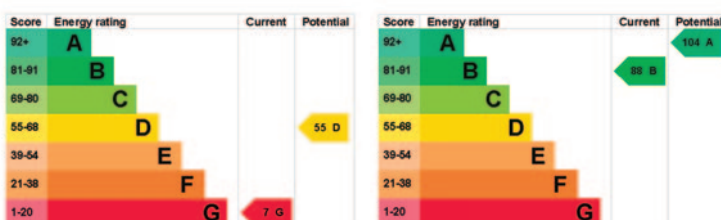
## Energy Efficiency

**The best ways to increase energy ratings for a building include:**

- Insulating the walls, roof, and floors.
- Installing double glazed windows.
- Installing energy efficient heating, lighting, and appliances.
- Improving air tightness.
- Installing renewable energy systems such as solar panels.
- Having an adequate amount of controlled ventilation systems

**Benefits of increasing the energy ratings of a dwelling include:**

- Lower energy bills for the occupants.
- Increased comfort and improved indoor air quality.
- Increased property value.
- Environmental benefits, such as reducing carbon emissions.
- Compliance with relevant legislation and avoiding penalties.
- Making the property more attractive to potential buyers or tenants.
- Improving the overall energy efficiency of the building.
- Making the property more sustainable



Under the new energy company obligation scheme, in order for a dwelling to qualify for any energy efficient measures, we must be able to take the energy rating of the dwelling from the low energy ratings of E, F or G, to high energy ratings of C or B.

# First Time Central Heating Mains Gas

## What is Mains Gas Central Heating?

- A mains gas central heating system is generally a combination boiler connected to the mains gas services within the vicinity.
- The combination boiler is then connected to a wet radiator system inside the house to provide heating.
- The combination boiler will also be connected to any taps or showers to provide hot water to the dwelling (excluding electric showers).
- Larger properties will receive a regular boiler with a hot water cylinder.



## Dwellings that qualify

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Cavity built dwellings

## Pre requirements

- ✓ The cavity to be insulated if the property is cavity built
- ✓ All roofs to be insulated if they are uninsulated
- ✓ Low energy rating (E, F, G)

## COMMON QUESTIONS

### 1 | What is the approved document L legislation update of 2022?

As part of the Approved Document L, all new and replacement wet space heating systems in domestic dwellings will have to be designed with a maximum flow temperature requirement of 55°C. This is considered important for system efficiency. This means that any new gas or oil boiler systems installed will have the same size radiators as an ASHP.

### 2 | Will my cylinder be removed?

Yes, the cylinder will be removed as the new boiler will also heat hot water.

# First Time Central Heating an Air Source Heat Pump

## What is a Air Source Heat pump?

- A heat pump is principally a boiler without the flue. It heats water up and pumps it around your radiators. As well as heating your home, an air source heat pump heats your hot water, just as a traditional gas or oil boiler would as well.
- As an air source heat pump produces no CO<sub>2</sub>, it is considered an environmentally friendly and renewable alternative to heating your home and water.
- Heat pumps, like boilers, are devices that can heat your home and hot water. Heat pumps work by moving heat from colder places (outside) to warmer places (your home), even when it's cold outside.
- They use a special gas called a "refrigerant" and electricity to make it happen.
- The heat pump uses electricity to make the refrigerant gas go through a compressor, which squeezes the gas and makes it hotter. This hot gas goes to a heat exchanger inside your home, where it gives off its heat and warms up your home.
- As it gives off heat, the gas cools down slightly. Then, it's allowed to expand, which makes it even cooler. Now it's cooler, it can absorb more heat from the outside and start the process again.
- The heat that the heat pump delivers to the heat exchanger is used to heat your home. It keeps repeating this process, taking heat from the outside and transferring it to the inside your home.
- An air source heat pump will provide you with your required heating and hot water demands throughout the year.

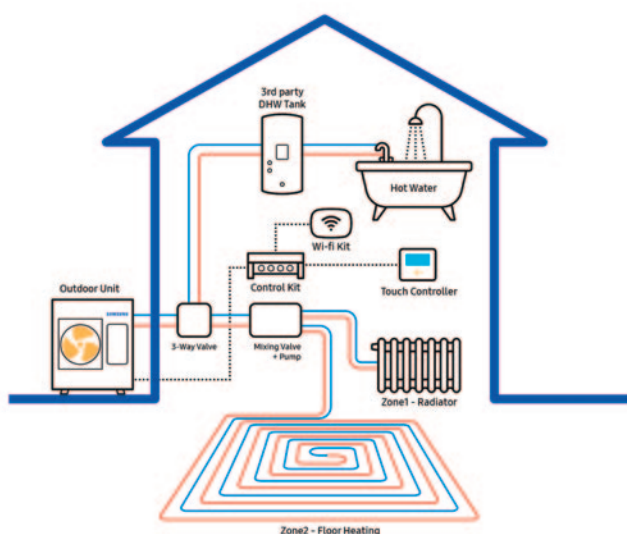


## Dwellings that qualify

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Cavity built dwellings
- ✓ Off gas grid dwelling

## Pre requirements

- ✓ The cavity to be insulated if the property is cavity built
- ✓ All roofs to be insulated if they are uninsulated
- ✓ Low energy rating (E, F, G)
- ✓ If the dwelling doesn't qualify for mains gas central heating.



## COMMON QUESTIONS

### 1 | Are air source heat pumps efficient?

The efficiency of an air source heat pump is measured by its coefficient of performance (COP). The coefficient of performance is the ratio of the heat output to the energy input, and it varies depending on the temperature outside.

A coefficient of performance of 3.5 means that for every 1 unit of electricity consumed, 3.5 units of heat energy are generated. The coefficient of performance of our air source heat pumps is 3.5.

### 2 | Does it heat my hot water as well?

An air source heat pump can be connected to a hot water cylinder to heat the water for domestic use. The cylinder can also be heated using electricity directly if the ASHP is switched off.

### 3 | Why will I need big radiators?

Radiators for an air source heat pump (ASHP) need to be two to three times bigger than those of traditional heating systems such as gas because air source heat pumps run at a lower temperature of 55°C and therefore require more surface area to transfer the same amount of heat to the room.

### 4 | What is the approved document L legislation update of 2022?

As part of the Approved Document L, all new and replacement wet space heating systems in domestic dwellings will have to be designed with a maximum flow temperature requirement of 55°C. This is considered important for system efficiency. This means that any new gas or oil boiler systems installed will have the same size radiators as an ASHP.

### 5 | Does it come with a guarantee?

The air source heat pump comes with a seven-year manufacture warranty and a two-year quality mark guarantee.

# Boiler Upgrade

## What is a boiler upgrade?

- Under the ECO4 scheme we can also offer boiler upgrades. Boiler upgrades are offered to dwellings that currently have an inefficient type of boiler in their home.
- Properties that are in a mains gas area with an inefficient boiler present are eligible for a condensing combination boiler only.
- Properties that are outside a mains gas area with a LPG, BULK LPG, Oil or back boiler present are eligible for an air source heat pump system only.
- Types of boilers that are considered for an upgrade under the ECO4 guidelines are:
  - 1) Noncondensing gas boilers
  - 2) Noncondensing & condensing LPG boilers
  - 3) Noncondensing & condensing Bulk LPG boilers
  - 4) Noncondensing & condensing Oil boilers
  - 5) Back boilers

If your property has one of the above, you may be eligible for an upgrade. The upgrades available for any of the above systems could be:

- Replacement gas boilers
- Air source heat pump



# Heating Controls

There are a variety heating controls we can offer under ECO4 along with installing certain measures. These heating controls are:

- Smart Programmer
- Thermostatic radiator valves (TRV)
- Weather compensation
- Time and temperature zone control

## COMMON QUESTIONS

### 1 | Can I control them on my phone?

All our controls are online compatible, and our installers are happy to set this up for you.

### 2 | What is a smart programmer for central heating?

A smart programmer allows remote control of heating schedules and temperatures via smartphone or computer.

### 3 | Can I integrate smart programmers, thermostats, TRVs, and TTZCs together?

Yes, many systems are compatible, creating a comprehensive, efficient, and interconnected heating setup.

# High Heat Retention Storage Heaters

## What are High Heat Retention Storage Heaters?

- High heat retention storage heaters work by using electricity to heat the ceramic bricks inside the heaters, during off-peak hours, when electricity rates are lower.
- Once the bricks are heated, they retain the heat and release it into the room gradually during the day, providing a steady source of heat.
- The heaters can be controlled by a thermostat, which allows you to set the desired temperature and schedule when you want the heaters to turn on and off.
- Elnur high heat retention storage heaters also have a feature called "boost" mode, which allows you to quickly heat up the room when you need it.
- They are more efficient than traditional electric heaters as they use off-peak electricity tariff, and are very efficient at storing heat during the night to release during the day.



## The installation process of storage heaters

- The installers must first remove any old heating systems in the dwelling.
- All living areas and hallways/landings are to have storage heaters installed.
- If feeds are not present in these areas for storage heaters, the installers must run new feeds, wall mounted and in trunking to the new locations.
- All bedrooms are then to have wall mounted electric heaters that can be plugged in.

---

## Dwellings that qualify

---

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Cavity built dwellings
- ✓ Flats
- ✓ Maisonettes
- ✓ Dwellings where a heat pump would not fit

---

## Pre requirements

---

- ✓ Only to be installed if the property is unable to have a form of central heating from the above measures
- ✓ Low energy rating (E, F, G)
- ✓ The dwelling needs to be on off peak tariff or obtain an off-peak tariff
- ✓ All roofs to be insulated if uninsulated
- ✓ Cavity to be insulated if present and uninsulated



---

## COMMON QUESTIONS

---

### 1 | Can they be turned off?

Yes, the high heat retention storage heaters can be turned off.

### 2 | Does it come with a guarantee?

High heat retention storage heaters come with a two-year quality mark guarantee, as well as a 5 year manufacturer's warranty.

### 3 | I have been told I qualify for an air source heat pump. But, I want storage heaters. Is this possible?

Unfortunately, if a dwelling qualifies for an air source heat pump, we can't install storage heaters.

# Internal Wall Insulation

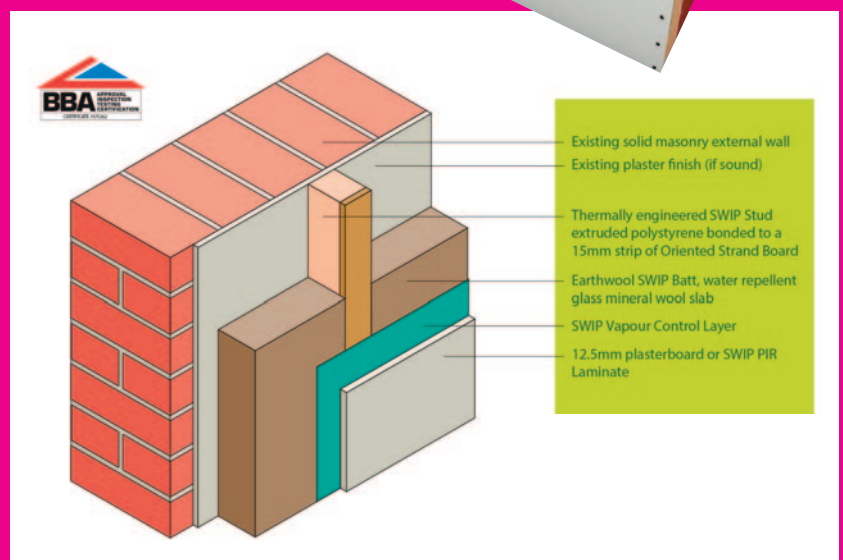
## What is Internal Wall Insulation?

- Internal wall insulation is an insulation system that consists of insulating all external walls of a dwelling, internally.
- All external wall of a dwelling must be insulated with the SWIP system apart from the external walls in wet rooms (kitchens, bathrooms, utility rooms and WC's).
- Due to the impracticability of trying to insulate wet rooms, they do not get insulated. However, we must then install DMEV fans into wet rooms and prove we can heat the room to 18°C when occupied.



## The install process of the SWIP internal wall insulation system consists of:

- Fixing insulated battens to the inside of the external wall.
- Installing a glass mineral wool insulation slab in-between the insulated battens.
- Securing a vapour control barrier across insulation and battens.
- Laying plasterboard on top of vapour control barrier.
- Providing a plastered finish to the plasterboard wall.
- Installing any required wood work to treated walls.



---

## Dwellings that qualify

---

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Flats & maisonettes

---

## Pre requirements

---

- ✓ No signs of excessive damp or mould
- ✓ No signs of any structural movement
- ✓ To be solid build
- ✓ Low energy rating (E, F, G)
- ✓ Ventilation as per PAS 2035 guidance



---

## COMMON QUESTIONS

---

### 1 | What is the thickness of the insulation?

The finished product takes approximately 100mm off the wall. In some instances, we can thin the insulation down where the thick insulation may cause issues e.g. When opening and shutting doors.

### 2 | What's included?

We will take any of the treated walls up to a plastered finish. Anything that has been removed e.g. skirting boards, window sills, electrics, plumbing. Will be re installed or replaced. Covings will not be replaced generally, and window sills will be replaced with MDF sills only.

### 3 | What if I don't want one room done?

All habitable rooms of a dwelling must be insulated. The only rooms that are exempt are wet rooms.

### 4 | Does it come with a guarantee?

The internal wall insulation comes with a 25-year quality mark protection guarantee.

### 5 | What happens to my bathroom and kitchen?

All wet rooms do not get insulated during the install process. All wet rooms will need extractor fans installed and we will need to evidence that we can heat these rooms up to 18°C

# Room in Roof Insulation

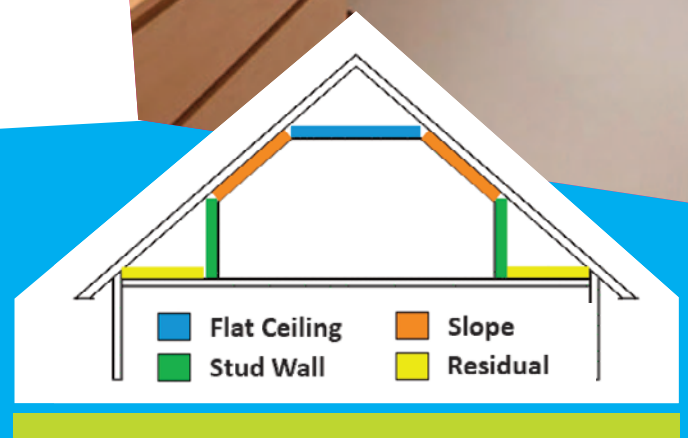
## What is Room in Roof Insulation?

- Room in roof insulation consists of insulating the top storey of a building that has over 50% of its dwarf walls under 1.8m. Room in roof insulation consists of insulating the slopes, dwarf walls, gable ends, party walls, flat ceilings and residual spaces of a qualifying room in roof.
- The insulation system used is the SWIP room in roof system.
- All external elements of the room in roof must be insulated apart from the external elements in wet rooms.
- Due to the impracticability of trying to insulate wet rooms, they do not get insulated. However, we must then install DMEV fans into wet rooms and prove we can heat the room to 18°C when occupied.



## The installation process of the room in roof insulation system consists of:

- Insulated plasterboards are fixed to the rafters on any slopes of the room in roof and then plastered over.
- The SWIP internal wall insulation system is installed to all gable walls and party walls.
- When the dwarf wall element is a timber wall, Rockwool is fixed to the backside of the studwork in netting.
- When the dwarf wall element is a masonry wall, the SWIP IWI system is used to insulate the wall.
- The flat ceiling of a room in roof will have rock wool insulation placed inside the flat ceiling area if there is enough crawl space.
- The flat ceiling will be overboarded with insulated plasterboard if there is not enough crawl space, and then plastered.
- The residual space floors will have rock wool insulation installed in-between the joists if residuals are present.
- Any woodwork removed will be replaced (only skirting boards and window-sills) and any plumbing or electrical fixtures will be made good.



## Dwellings that qualify

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Cavity built dwellings
- ✓ Flats
- ✓ Maisonettes
- ✓ Houses
- ✓ Bungalows

## Pre requirements

- ✓ No signs of any structural movement e.g. subsidence
- ✓ Low energy rating (E, F, G)
- ✓ Ventilation to be installed alongside the measure as per PAS 2035 guidance
- ✓ For the proposed room in roof dwarf walls to be under 1.8m for 50% of the dwarf walls
- ✓ To have a fixed staircase up to the room in roof



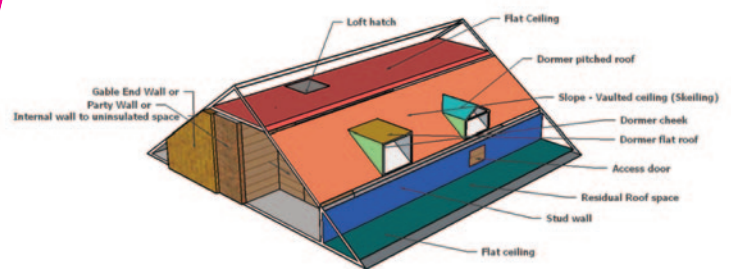
## COMMON QUESTIONS

### 1 | What is the insulation thickness?

100mm on gable walls or party walls, 100mm on masonry dwarf walls, 300mm on studwork dwarf walls, 67mm on the slopes, 300mm in flat ceiling if accessible, 67mm if the flat roof is inaccessible and 300mm in residual crawl space

### 2 | What's included?

We will take any of the treated walls up to a plastered finish. Anything that has been removed e.g. skirting boards, window sills, electrics, plumbing. Will be re installed or replaced. Covings will not be replaced generally, and window sills will be replaced with MDF sills only.



### 3 | What if I don't want one room done?

All habitable rooms of a dwelling must be insulated. The only rooms that are exempt are wet rooms

### 4 | Does it come with a guarantee?

Room in roof insulation comes with a 25-year quality mark guarantee.

# Cavity Wall Insulation

## What is Cavity Wall Insulation?

- The material used to install cavity wall insulation is called Therma beads.
- Therma beads are small polystyrene like beads that are pumped inside the cavity between the inner and outer bricks of a cavity-built house



## The installation process of the cavity wall insulation system consists of:

- Holes are drilled on the external elevations of the dwelling (about the size of a 10p piece).
- The material is then injected into these holes under pressure
- The material will be injected and completely fill the whole cavity (space between inner and outer bricks).
- The holes are then patched up.
- All elevations with an empty cavity space in a dwelling must be filled with Therma beads to qualify for any heating grants.

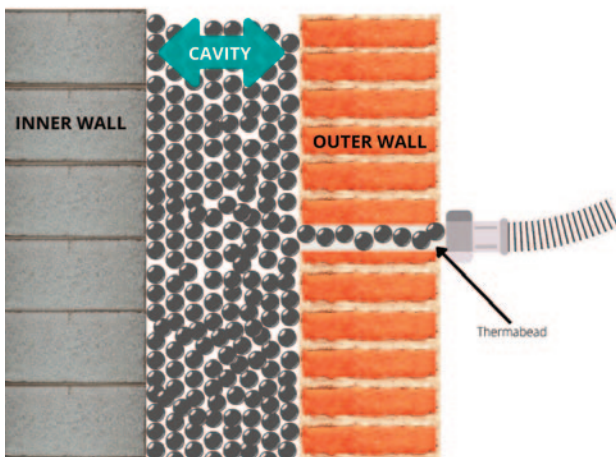


## Dwellings that qualify

- ✓ Cavity built dwellings with empty cavities
- ✓ Cavity built extensions with empty cavities
- ✓ Cavity built flats
- ✓ Cavity built maisonettes

## Pre requirements

- ✓ To be cavity built
- ✓ To have no existing issues of any type of damp or water ingress
- ✓ To have a DPC
- ✓ To have a secure DPC
- ✓ To have a low energy rating (E, F, G)
- ✓ Ventilation as per PAS 2035 guidance



## COMMON QUESTIONS

### 1 | Does it come with a guarantee?

The cavity wall insulation comes with a 25-year CIGA guarantee

### 2 | How's it installed?

As long as there are no pre-existing issues with the walls, cavity wall insulation installed correctly will not cause any issues.

### 3 | Will it cause damp or mould?

Properly installed cavity wall insulation will not cause damp or mould. However, if your building already has a damp or mould problem, it is important to address this issue before installing insulation.

### 4 | I've heard horror stories about CWI, will this happen to me?

Generally, the horror stories you here about are caused by the old-style cavity wall insulation which has a similar texture to loft insulation. If any water was to get in the cavity, the insulation would absorb any moisture and bridge the moisture and cause damp issues internally.

### 5 | Will your material cause damp issues?

Therma beads do not have any sort of absorption properties. If any water was to get into the cavity, it would drain through the bead to the bottom of the cavity, just as if the Therma beads were not there.

# Loft Insulation

## What is Loft Insulation?

- Loft insulation is a type of insulation that is installed in the attic or loft of a building to prevent heat loss through the roof.
- The insulation used is rockwool
- The insulation is placed on top of the attic floor, between the joists, and then put horizontally across the first layer of insulation
- It is also important to ensure that there is proper ventilation in the attic to prevent moisture build-up and mould growth.
- We will tend to install anywhere up to 400mm of the insulation. Size depends on what's currently up there. We aim to have 400mm insulation up there after any work is done
- Tanks, pipes and wires may need lagging or insulating also.



## Dwellings that qualify

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Cavity built dwellings

## Pre requirements

- ✓ Existing loft insulation to be under 200mm
- ✓ Low energy rating (E, F, G)
- ✓ No protected species in loft
- ✓ No hazard species e.g. Wasps in the loft
- ✓ To have a non-fixed form of access e.g. ladder
- ✓ Ventilation as per PAS 2035 guidance

## COMMON QUESTIONS

### 1 | Can I keep my loft boarded?

If additional insulation is desired, you will either need to remove the boards then re-install them once we have installed the loft insulation, let us install on top of the boards or we can attempt to try and install the right amount of insulation underneath the existing boards.

### 2 | Does it come with a guarantee?

Loft insulation comes with a two-year guarantee.

### 3 | My loft is boarded, does it still need insulating?

Loft insulation would still be required to install in order to qualify for any heating grants

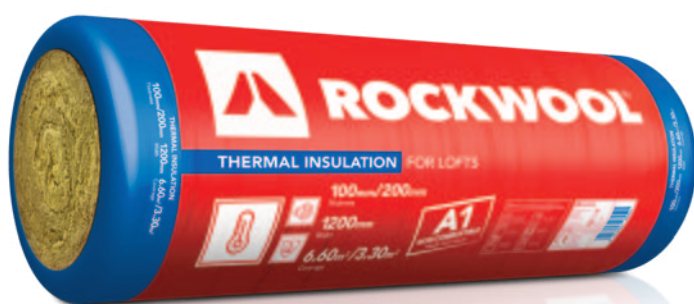
### 4 | Will I need to empty my loft before the install date?

We would like the loft cleared prior to the installers arrival. In cases where the occupier are unable to empty the loft due to personal reasons, the installers will empty on their behalf.

# Suspended Floor Insulation

## What is Suspended Floor Insulation?

- Underfloor insulation is installed when there is enough space under the suspended floor for an installer to access with the insulation.
- Insulation is installed between the floor joists and is secured in place in netting that is secured to the joists.



## Dwellings that qualify

- ✓ Dwellings that have suspended floors covering over 50% of the property
- ✓ A minimum of 0.5m of crawlspace under the suspended floor
- ✓ Dwellings with uninsulated suspended floors

## Pre requirements

- ✓ No underfloor insulation to be present
- ✓ For the property to have a suspended floor present with adequate crawl space
- ✓ Low energy rating (E, F, G)
- ✓ No hazard species e.g. Wasps.
- ✓ Ventilation as per PAS 2035 guidance

## COMMON QUESTIONS

### 1 | What is the material used?

Rockwool insulation is used.

### 2 | What thickness insulation do you install?

This is dependent on the thickness of the floor joist.

### 3 | Does it come with a guarantee?

Underfloor insulation comes with a twenty-five-year quality mark guarantee.

# Solar Photovoltaics (PV)

## What are Solar Photovoltaics?

- A solar PV system converts sunlight into electricity using solar panels and an inverter.
- The solar panels absorb sunlight and convert it into DC electricity.
- The inverter converts the DC electricity into AC electricity that can be used in the dwelling on whichever appliance is being used at that time.
- The system is connected to the electrical grid and any excess electricity is fed back into the grid.
- The system operates by absorbing sunlight and converting it into usable electricity.



## Dwellings that qualify

- ✓ Stone built dwellings
- ✓ System built dwellings
- ✓ Timber frame dwellings
- ✓ Solid brick dwellings
- ✓ Cavity built dwellings

## Pre requirements

- ✓ Good roof condition
- ✓ To have an electric form of heating present in the dwelling (if we are installing one then that qualifies also).
- ✓ Have a low energy rating (E, F, G)

# Ventilation

Ventilation is required in a dwelling when any type of fabric measure is installed (internal wall insulation, loft insulation, room in roof insulation, flat roof insulation, underfloor insulation and cavity wall insulation).

When any type of fabric measure is installed, it can alter the permeability of the dwelling and could invite issues to occur as a result. The main concerning issues are

- Introducing thermal bridging which can lead to cold spots forming.
- Mould and condensation forming
- Reducing the amount of fresh air entering the dwelling which reduces the amount of water vapour being expelled from the building
- Poor internal air quality

**When installing any fabric measure, we must look at the following ventilation aspects:**





---

## Background Ventilation

---

Background ventilation is a whole house ventilation system that allows the introduction of fresh outside air into a habitable room without opening a window. The purpose: To remove stale indoor air and replace it with fresh outside air.

This is achieved by installing trickle vents in windows or openable vents in external walls in all habitable rooms of a dwelling (bedrooms, dining rooms, living rooms, studies etc).

To support this, undercuts are also required on all internal doors leading from habitable rooms. An undercut will be deemed adequate if it is 10mm or larger (with some exceptions).

---

## Combustion Ventilation

---

Combustion air vents (core vents) provide a permanent (cannot be closed) supply of combustion air to rooms containing fuel-burning appliances which are not room-sealed. Rooms that require combustion ventilation are rooms with any of the following that are in use/could be used:

- Open fire places (The size of an air vent is subject to the throat cross - sectional area of the flue:- [50%])
- Closed fire places over 5kw (the size of the vent would be 2.3cm x 2.3cm for each KW over 5kw)
- Gas fires over 7kw (the size of the vent would be 2.3cm x 2.3cm for each KW over 7kw)
- Rayburns or Agas

---

## Purge Ventilation

---

Purge ventilation is manually controlled ventilation of rooms or spaces at a relatively high rate to rapidly dilute pollutants and/or water vapour and may be provided by natural means (for example, an openable window) or by mechanical means (for example, a fan). Many dwellings will pass this aspect of ventilation. In some cases, habitable rooms that do not have openable windows, will need extractor fans installing in them.

---

## Extract Ventilation

---

Extract ventilation to the outside of the dwelling should be provided in all wet rooms to extract moist or stale air from the room to the outside of the building. Wet rooms include the following spaces:

- Kitchens
- Utility rooms
- Bathrooms
- WC without openable windows

When installing any form of fabric measure in a property, if the property does not currently have any form of extractor fan in the wet rooms, we must install them in order to proceed with the project.

The two types of extract ventilators that are used alongside projects installing fabric measures are intermittent extract ventilators (IEVs) and decentralised mechanical extract ventilators (DMEVs).

When installing internal wall insulation, wet rooms are exempt from getting insulation due to the impracticality of removing fixed units to install the insulation systems. For wet rooms then we must:

- Ensure the rooms can be heated to 18°C when occupied
- Install DMEVs in all wet rooms of the property

---

## Pulse Testing

---

The pulse test is a type of air tightness testing method used to test the air permeability of a dwelling using compressed air. The pulse test system includes an air receiver and nozzle unit, and an air compressor unit and a control screen.

The air permeability of the house assesses how 'leaky' the house is. When a test is conducted in a dwelling, if the air permeability level is over 5m<sup>3</sup>/m<sup>2</sup>h, it means that the dwelling's permeability is sufficient to not need trickle vents and undercuts installed when proposing to install fabric measures under ECO.

---

## How is a test done?

---

- The pulse equipment is brought to the building being tested. It's easy to carry and has all the necessary parts.
- The pulse equipment is set up and the air receiver is filled with compressed air using the compressor. This air receiver will pressurize the building and reveal any leaks.
- The volume of the building and its surfaces are calculated to calculate the air leakage rate and air permeability of the building.
- The pulse test begins. The pulse tester will release air into the building, and sensors will measure the pressure differences and airflow rate. The results are displayed on the control unit. The test will provide information about how airtight the building is and how much air is leaking through it.
- A report is then generated to use as supporting evidence to meet certain ventilation standards that are followed under ECO4.
- Extractor fans and combustion ventilation must still meet current standards of building regulations regardless of the air permeability of the dwelling.



**This booklet is provided to give customers a basic understanding of the type of measures that houses and individuals may qualify for but is not guaranteed until an initial assessment conducted by a qualified surveyor.**



CYNGOR SIR  
YNYS MÔN  
ISLE OF ANGLESEY  
COUNTY COUNCIL



Scan to Apply



MENAI HEATING  
Top Floor | Old Bank Building  
Menai Bridge | LL59 5WY  
t. 01248 421 044  
e. info@menaiheating.co.uk  
[menai.co.uk](http://menai.co.uk)