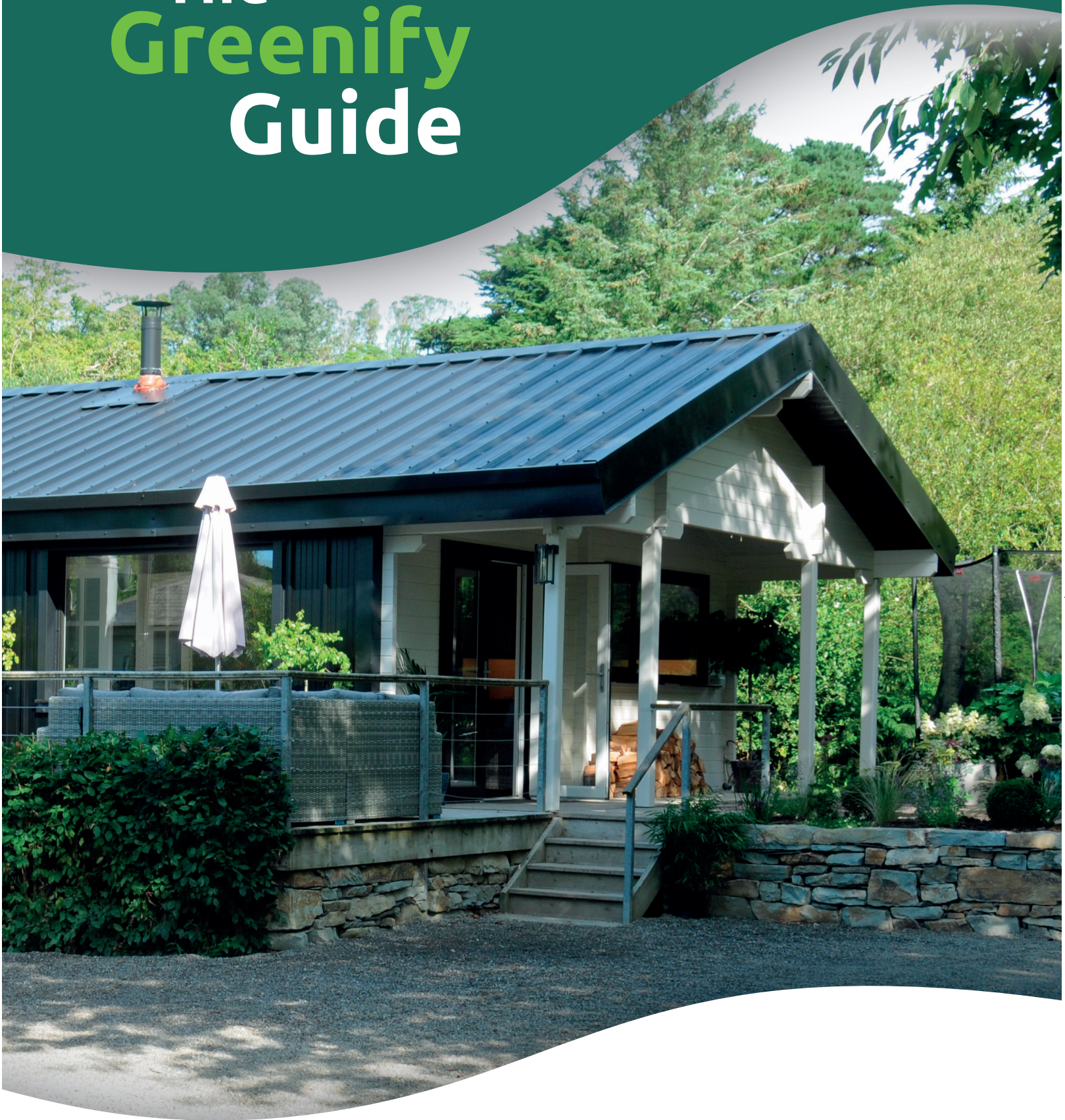


The Greenify Guide



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Compiled and edited by *ifac*

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Hello,

Welcome to the Greenify Guide.

The last few years have fundamentally changed how we use our homes. Increased levels of working from home and the rising cost of fossil fuels have highlighted the need for Irish homes to be better insulated, more comfortable and more energy efficient.

In response to the wider Climate Crisis, a number of credit unions throughout the country are actively engaging in this space to see how they can better support their members on their journey towards greener homes.

One such way is the promotion of Greenify, a home energy upgrade brand rooted in core credit union principles. "Greenify" is an action word that reflects a process or an opportunity for credit union members to improve the home energy efficiency of their homes. It is based on key credit union principles: Keep it Local, Keep it Personal and Keep it Simple.

Through case studies from some of our Greenify homeowners, we will highlight the process of delivering home energy upgrades and discuss some of the benefits from engaging with this opportunity.

We hope that you find this guide beneficial and that you see how, with the help of St. Colman's (Claremorris) Credit Union, now is the time to greenify your life.

Feel free to connect with a member of St. Colman's (Claremorris) Credit Union if you think we can help on your Greenify journey.

Best wishes,

Ciarain Doherty,
Head of Lending

The three levels of home greenification



Level #1 Greenify

1. Practical steps to Greenifying your home

- ✓ **Action 1** – Switch to LED lightbulbs. These type of bulbs consume 85% less energy than traditional lightbulbs.
- ✓ **Action 2** – Fit a lagging jacket to your hot water cylinder. An uninsulated hot water cylinder could be costing you up to €1 per day in lost heat.
- ✓ **Action 3** – Turn down heating thermostats. Reducing the inside temperature by 2 degrees could save you up to 10% on your heating bill.
- ✓ **Action 4** – If you have a condensing boiler reduce the boiler flow temperature to 60 degrees. This could make your boiler 10% more efficient.

Level #2 Greenify

2. Greenify your home with minimum expense

- ✓ **Action 1** – Get your boiler serviced. This will increase the efficiency of your boiler by at least 10%.
- ✓ **Action 2** – Fit TRVs (thermostatic radiator valves) on all radiators. This allows you to adjust the heat output from the radiator and to set different temperatures in different rooms. Rooms used infrequently can be kept at a lower temperature, saving you energy and money.
- ✓ **Action 3** – Replace open fires with a stove or fit a Fire Door to your open fire. This will increase the efficiency and reduce the required fuel by about 30%.
- ✓ **Action 4** – Insulate your attic. This is the cheapest insulation upgrade you can do. Up to 25% of heat loss from a home occurs through the roof and attic space. Ensuring you have 300 to 400mm of quilt insulation in your attic will eliminate most of this heat loss.
- ✓ **Action 5** – Reduce the draughts in your home. If there are draughts in your windows and external door openings then have the seals around these replaced. Fit an air tight seal in your attic hatch door. Unused fireplaces should be sealed with an inflatable air balloon fitted up in the chimney. Heat loss due to air infiltration (draughts) can be significant, accounting for up to 15% of heat loss, so reducing the most obvious draughts could reduce your heat loss by 10%.

Level #3 Greenify

3. Greenify your home with a larger scale investment

- ✓ **Action 1** – Insulate the external walls of your home. This can be achieved by getting bead insulation pumped into the wall cavity, adding external wall insulation or internal dry lining. Heat loss through external walls can account for 35% of all heat lost from a house. Therefore adding insulation can significantly reduce this heat loss and also reduce infiltration heat losses that occur through gaps in the structure.
- ✓ **Action 2** – Replace old boilers. If your boiler is more than 15 years old it is most likely a standard non-condensing boiler. These boilers are typically only 60-70% efficient. Installing a condensing boiler with an efficiency above 90% can dramatically reduce your oil or gas consumption and reduce your CO₂ emissions.
- ✓ **Action 3** – Upgrade your heating controls. Separating your heating and domestic hot water system into separate zones allows you to better control the heating of different parts of your home, allows you to set different temperatures in your living and sleeping zones, and allows you to heat only domestic hot water when required.
- ✓ **Action 4** – Upgrade your windows. Window replacements can be expensive, so careful consideration should be given to whether this intervention will be cost effective. Single glazed windows should always be replaced and double glazed windows more than 20 years old should also be considered. When replacing windows ensure air tightness tape is installed, joining the window frame to the surrounding wall. This will eliminate any air infiltration around the new window.
- ✓ **Action 5** – Install a photovoltaic (PV) system. PV panels convert sunlight into electricity. Installing a PV system on your roof allows you to produce up to 70% of the electricity required for your home. Excess or unused electricity can also be sold back to your electricity provider. Battery energy storage systems can also be installed to store excess energy for use at a later time.
- ✓ **Action 6** – Install a heat pump. Heat pumps are only cost effective to operate if the overall performance of the external envelope of your home is performing in line with a BER B rating. Therefore, it is important that you take a “Fabric First” approach to any upgrade project before you consider installing a heat pump. The operational costs of running a heat pump are not significantly lower than oil or gas at the moment. However this is expected to change in the future as oil and gas prices continue to rise while electricity prices stabilise as more of our electricity is produced from renewable energy sources. Heat pumps which run on renewable electricity will also produce no CO₂ emissions, making them better for the environment, helping us to reduce our carbon footprint.

How to choose the right home energy upgrade

As homeowners we have a wide range of options available to make our houses more comfortable, and more energy efficient and to reduce their carbon footprint. However, choosing which energy upgrade or technology is most suitable for your home can be difficult to determine.

To maximise your savings and reap all the benefits of improved comfort within your home it is important to plan your upgrades to ensure you get the best results. Your ultimate goal should be to upgrade your home to a BER B2 standard or better.

Whether you do this through one big step using a “deep retrofit” approach or a number of small steps, upgrading individual elements over a period of time as finances allow, the Sustainable Energy Authority of Ireland (SEAI) recommend the following approach should be undertaken to achieve a warmer and more efficient home.



1 Assess

To understand which energy upgrades will benefit your home most, start with a BER assessment to see how energy efficient your home currently is. The BER includes an advisory report, tailored for your home, which outlines steps that can be taken to increase the energy efficiency of your home to a minimum B2 energy rating. This advisory report does not tell you what specific options are available, and the associated costs, for various upgrade measures. Therefore, you should also consider talking to an energy consultant/advisor who will survey your house and give you specific advice on options most suitable for your home. To find a BER assessor, visit the SEAI website (www.seai.ie) and search the national registrar of BER assessors.



2 Insulate

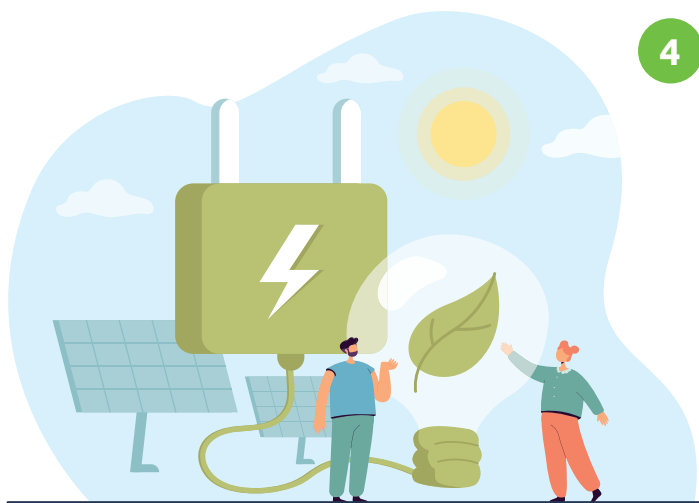
The golden rule in any home energy upgrade is to use a “Fabric First” approach. This means adding insulation to the external walls, the roof and possibly the ground floor of your home. Look closely at ways to eliminate the draughts that occur in your home; for example, you may need to upgrade your windows and external doors. A combination of these steps will increase the air tightness of your home. This will help to reduce the amount of heat required to keep your home warm, making it a more comfortable place to live while also reducing your heating bills.

How to choose the right home energy upgrade



3 Heating Controls

Home heating systems without proper controls will waste energy and result in higher running costs. Installing a zoned heating controls system in your home allows you to match your space heating and hot water requirements to the usage patterns in your home. This can reduce your energy usage by up to 20%. A typical modern control system is split into 3 zones, 2 for space heating (living and sleeping areas) and 1 for hot water to taps. Thermostats in the zones communicate with the boiler, only calling for heat when required.



4 Add Renewables

Only after the building fabric has been upgraded should you consider adding renewable or low energy systems to your home. These technologies can provide heat, hot water or electricity. The most popular systems installed are heat pumps, solar water heating panels, solar photovoltaic (PV) panels and heat recovery ventilation. Adding a renewable or low energy heat or electricity source to your home will help to reduce your energy bills, reduce your reliance on fossil fuels and reduce your carbon footprint. It will also help to improve the energy rating of your home.

Q&A with Colm Tynan

Colm Tynan is an experienced engineer with over 20 years' knowledge in the fields of low energy building design and sustainable home energy upgrades. He is currently programme director of the BEng (Hons) in Sustainable Energy Engineering course at South East Technological University (SETU) and lectures extensively in the areas of thermal performance of buildings, building services and energy systems for buildings.



What are the most common types of home energy upgrades in Ireland?

The most common types of home energy upgrades undertaken in Ireland include:

- ▶ Insulation upgrades to roof and external walls
- ▶ Window and door replacements
- ▶ Solar PV installations
- ▶ Heating controls upgrades
- ▶ Boiler upgrades or replacement with a heat pump
- ▶ Mechanical ventilation heat recovery installation and airtight envelope improvements

What retrofit measures are available for walls, roofs and floors?

1. Walls

There are 3 options available to upgrade external walls

- a) **Cavity fill insulation.** Cavity walls comprise an inner and outer layer separated by an air cavity. The cavity typically varies from 50mm to 110mm and in most circumstances this cavity can be filled by pumping polystyrene bead insulation into the residual air space.

- b) **Internal wall insulation (IWI).** Solid walls or hollow block walls can be insulated internally (dry lined) using either thermal laminate board (insulated plasterboard) or insulation between timber batons covered with plasterboard. Depending on the structural condition of the walls different insulation materials can be used to overcome problems such as dampness, mould growth or condensation.
- c) **External wall Insulation (EWI).** Insulation can be fixed to the external face of masonry or concrete structures and then covered with an acrylic render. EWI can improve the external appearance of the building and give it a real facelift.





2. Roofs

There are numerous upgrade options for both pitched and flat roofs, but the most common solutions are as follows.

Pitched roofs

- a) **No room in the roof space.** The easiest and cheapest option is to place sufficient insulation at ceiling level in the attic to achieve the desired U-value. It is recommended that a minimum thickness of 300mm quilt insulation should be installed.
- b) **Room in roof space (dormer construction).** If the roof space already contains rooms, then there may or may not be some insulation between the rafters above the plasterboard. The easiest option is to fit insulated plasterboard, with an integrated vapour control membrane, to the internal face of the sloped and flat ceiling surfaces.
- c) **Roof replacement.** If the roof slates or tiles need to be replaced and you intend using the roof space in the future then there is the option to insulate on the outside of the rafters before the new roof covering is installed. This is known as a warm pitched roof.

Timber flat roofs

- a) If the existing external weatherproof covering is in good condition:
 - i. The easiest and cheapest option is to add insulated plasterboard, with an integrated vapour control membrane, to the internal face of the ceiling. If the internal ceiling is in poor repair the plasterboard should be removed, insulation fitted between the rafters and then insulated plasterboard fitted to the internal face of the ceiling.
 - ii. In some circumstances adding internal insulated plasterboard will lower the floor to ceiling height to an unacceptable level. In these circumstances the best option is the add a layer of insulation on top of the existing roof deck and then cover this with a new waterproof membrane. This is known as a warm deck sandwich roof.
- b) If the existing external weatherproof covering needs to be replaced, then install a vapour control layer on top of the roof deck, then add a layer of insulation and cover with a new waterproof membrane.





Why upgrade windows and doors?

Replacing windows and doors is one of the most expensive thermal upgrade measures to undertake so you should consider carefully before undertaking this step. Other retrofit options for windows should also be considered before a full replacement is undertaken. The various retrofit measures include:

- ▶ Draughtproofing of existing windows.
- ▶ Re-glazing of existing window units within the frame. Sometimes the seal on the double-glazing unit will have failed and the gas trapped between the panes will have escaped.
- ▶ Replacement of windows. If your windows are single glazed, or double glazed but installed before 2002, then they should be replaced as their thermal performance is very poor.

3. Floors

The two most common types of floors in Irish homes are solid concrete ground supported floors and suspended timber floors.

- a) **Solid concrete ground supported floors.** In older buildings, these floors generally have no insulation. The simplest and cheapest solution to upgrading the thermal performance of these floors is to add a layer of insulation on top of the existing floor and then cover with either a 50mm concrete screed or a timber floating floor. A much more expensive solution is to remove the existing floor and replace with a new floor. Replacing a floor is an expensive intervention so it is important to achieve a high thermal performance if considering this option.
- b) **Suspended timber floors.** A suspended timber ground floor is constructed using timber joists spanning from wall to wall to support the floorboards above. An uninsulated floor has a very poor thermal performance. It allows heat to escape easily and gaps in the floorboards allow cold air to leak into the house above. Where floorboards can be lifted, insulation can be fitted between the joists. Recommended thicknesses of insulation are 250mm for mineral fibre quilt or 160mm for rigid board insulation.

Why switch to renewable energy sources?

The main reason for switching to renewable sources of energy is to reduce our carbon footprint. Burning fossil fuels (either gas, oil or coal) to produce our heat and electricity produces vast amounts of carbon dioxide. This is then released into the atmosphere where it causes global warming. Installing renewable energy systems in our homes, such as a solar PV system, allows us to produce our own clean energy, helps us cut the carbon emissions associated with our homes and helps us save money on our energy bills as we need to buy less energy from the utility companies. As energy prices continue to rise these savings will increase every year into the future.





What are the most common problems when it comes to home energy upgrades in Irish homes?

- ▶ Getting poor advice at the start and therefore spending money on the wrong upgrades.
- ▶ Some people partially upgrade their homes, possibly doing one or two interventions on their building fabric, but do not reduce the U-values sufficiently to come in line with a BER B2 standard. Remember your ultimate goal should be to reach a B2 standard or better so each intervention along your journey should fall in line with this standard. Failing to do this will mean you will have to address this element in the future again, costing you more money.
- ▶ Materials and labour costs are rising so the costs to upgrade a home are increasing. However energy costs are rising at a faster rate than construction costs so it is still a good time to upgrade. Remember you only have to pay for an energy upgrade once and it will last you a lifetime but you have to pay for your energy usage every month and the price of energy will continue to rise in the years ahead.

- ▶ Difficulties finding reputable contractors that are registered with the SEAI. This is currently a major problem, especially for deep retrofit projects as there are more homeowners wanting to undertake an upgrade than there are contractors available to do the work.

Looking forward, what do you see as the key factors to help Irish homeowners on the journey to more energy efficient homes?

- ▶ Current grant schemes for individual interventions need to be expanded, e.g. inclusion of a grant for windows and doors replacement.
- ▶ As construction costs increase grant amounts also need to increase.
- ▶ Introduction of a recognised ladder system which would help homeowners who cannot afford to undertake a deep retrofit. An energy consultant could set out the interventions necessary to upgrade the house to a B2 standard. The homeowner could then undertake these interventions one at a time over a number of years as their finances allow, knowing that when all are complete, they will have achieved a B2 rating.
- ▶ Many of the financial institutions are offering energy finance packages for deep retrofit energy projects only. These projects are very costly, often €50-60K, and therefore beyond the reach of many homeowners. However, the Greenify loan available through participating credit unions offers finance for individual energy upgrade interventions, allowing customers to access finance for smaller energy upgrade projects. This initiative should help many credit union members to start their journey to a more comfortable and energy efficient home.

How to finance your home energy upgrades

The more you talk to Irish homeowners, the more you realise that homeowners throughout the country are actively looking at ways to make their homes more sustainable, more comfortable and more energy efficient.

But sourcing the right finance from people and institutions they can trust is often a challenge and a barrier to people who are trying to “to the right thing”. Through Greenify, our green home energy upgrade loan, credit unions are removing these barriers by offering people affordable and flexible finance from a lender they can trust.

Greenify is a home energy upgrade loan that offers:

- ▶ Loans up to €75,000 over 10 years
- ▶ Unsecured lending
- ▶ There is no need to be an existing credit union member
- ▶ Variable interest rate of 6.50%, (typical APR 6.70%)



Variable Interest Loan Amount	Term	96 Monthly Repayments	Total Amount Payable
€30,000	8 years	€401.59	€38,540.72

As at 31/01/2023

Greenify loans can be used for a range of home energy upgrades including but not limited to:

- ✓ Home retrofit project (from shallow to deep)
- ✓ Attic insulation
- ✓ Heat recovery systems
- ✓ Boiler replacement
- ✓ Exterior wall insulation
- ✓ Insulated doors
- ✓ Solar panels/systems
- ✓ Heating controls
- ✓ Interior wall insulation
- ✓ Heat pump installation
- ✓ Thermal upgrades
- ✓ Demand control ventilation

WARNING - IF YOU DO NOT MEET THE REPAYMENTS ON YOUR LOAN, YOUR ACCOUNT WILL GO INTO ARREARS. THIS MAY AFFECT YOUR CREDIT RATING WHICH MAY LIMIT YOUR ABILITY TO ACCESS CREDIT IN THE FUTURE.

Loans are subject to approval. Terms & Conditions apply. Credit unions in the Republic of Ireland are regulated by the Central Bank of Ireland.

Grant Support

Grants are available to homeowners through the Sustainable Energy Authority of Ireland (SEAI). There are three main areas of support to be aware of:

- ▶ Free energy grants for those in receipt of certain social welfare payments.
- ▶ One stop shop supports for homeowners who want to improve their BER up to B2 (at least) in one go.
- ▶ Individual energy upgrade grants for homeowners who want to improve the comfort of their home over an extended period of time.

For more information and a full list of grants available through the SEAI, visit www.SEAI.ie



Greenify case studies

Teresa and Denis Kelly, Greenify Homeowners

The Kelly family accessed a Greenify Credit Union loan to turn an old, historic farmhouse into a modern, sustainable home. The Kellys used the loan to install a heat recovery system which has reduced their electricity bill immensely, making the 100-year-old house much cheaper to run. The Kellys accessed their Greenify loan through their local credit union. They praised the credit union for their support – saying they were easy to deal with and made the experience incredibly personal. Greenify Credit Union finance allowed the Kellys to make their home more comfortable while “doing our bit for the environment and our pocket”.



Maria Collard and Matt Deane, Greenify Homeowners

Maria Collard and Matt Keane are long time credit union members who run a successful and well-respected garden centre. So when it came to renovating their family home, they naturally turned to their local credit union to see what the credit union had to offer. With a major renovation project that included new windows, external roof, wall and floor insulation as well as a ventilation system, they were ideal candidates for a Greenify loan. The couple were delighted with how quick and easy the process was, and they were especially pleased that the entire process (including all decisions) was handled locally by local people.



Participating Greenify Credit Unions





w www.claremorriscu.ie
e info@claremorriscu.ie

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