

ENERGY SAVING BOOKLET



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About this booklet:

This booklet has been developed with the primary aims of:

1. The reduction of CO₂ emissions through the mitigation of energy-related emissions.
2. Assisting households with the management and reduction of their household energy costs.

It has been developed in accordance with Waterford City and County Council's adopted Climate Adaptation Strategy 2019-2024, the Council's Roadmap to Carbon Neutrality 2040 and commitments made under the EU Covenant of Mayors.



Unsure of any terms used in this booklet? Please refer to Tips and Terms found at the back for an explanation. If you have any queries, you can contact Waterford City and County Council Environment Department by phone on 0818 10 20 20 or email contact@waterfordcouncil.ie.

Waterford City and County Council bear no responsibility for any errors or omissions within this booklet. The information contained within is intended as guidance only.

Introduction

Everyone relies on energy to run their home. Be it for heating, cooking or powering appliances. In Ireland, we rely primarily on fossil fuels such as coal and gas for our energy needs. As Ireland does not produce enough for our own needs, we need to purchase them from other countries. This makes us a fuel-importing nation. It is a national target to reduce our reliance on fossil fuel imports and switch to renewable energy alternatives such as wind and solar power that are produced within Ireland. By 2030, under the Climate Action and Low Carbon Development Act, national greenhouse gas emissions must be reduced by 51% compared to 2018 levels. Ireland’s energy mix is changing. Renewable energy is becoming more widespread, helping to reduce our national emissions. However, until such time as this reaches a sufficient level, we must all play our part to reduce the levels of fossil fuels we use.

At present, across Europe households are struggling with rising energy costs. In Ireland, this is resulting in households being at risk of or suffering from the effects of energy poverty. As per the UN Sustainable Development Goals, no one should have to suffer the effects of poverty or lack of access to clean, affordable energy.

7 AFFORDABLE AND CLEAN ENERGY



In response to the energy-related issues facing Irish households, Waterford City and County Council’s Climate Action Team have developed this Energy Saving Booklet. Though a small gesture, it is intended to act as a baseline from which the people of Waterford can reduce their use, reduce their emissions and save money.

Energy Poverty

Energy poverty is a cross-cutting societal issue that is unfortunately on the rise in Ireland as a result of increasing energy prices. A household is considered to be in or at risk of energy poverty where they cannot achieve a comfortable and safe standard of warmth in their dwelling at an affordable cost. According to the Government's most recent strategy to tackle energy poverty, "A strategy to Combat Energy Poverty 2016-2019", up to 28% of households in Ireland are in or at risk of energy poverty. However, due to the current global energy crisis, the Economic and Social Research Institute has projected this could reach as high as 43% this winter.

The 3 main drivers of energy poverty are:

- Low income
- Energy efficiency of a dwelling
- Energy prices

Another marker often used is that if a household is spending 10% or more of its discretionary income per week on energy costs, they are considered to be "energy poor".

The government is actively working to address energy costs through various initiatives and financial supports. However, it is also important we take individual and collective action to reduce our use. Simple, everyday measures can make a difference to the bottom line on our bills. We will now look at some of these.



Procuring Your Energy

Household energy bills for gas and electricity are measured in kilowatt-hours. A kilowatt-hour, or “kWh” for short, is a unit of measurement used to quantify energy usage. Bills are calculated based on a unit cost (cent) per kWh.

There are 1,000 watts in a kilowatt. 1 kilowatt is the amount of energy you would use to keep a 1kWh appliance running for an hour. If you want to calculate exactly how many kWh an appliance uses per day, you can take any appliance’s wattage and multiple it by the number of hours it was running. Then, simply divide that figure by 1000 to see how many kWh the appliance used. For example, to use 1kWh of energy you would need to use a 1,000-watt electric heater for 1 hour.

In 2020 the average Irish home used 20,955 kWh of energy — split into 76% from direct fuel (oil, gas, coal and peat) and 24% from electricity.

Sometimes, a quick way to make savings on your energy bill is to switch suppliers.

The process of switching can seem daunting if you are not sure where to begin. Here are some general guidelines that can make the process easier:

Step 1:

- **Who is your current supplier and what are you currently paying?**
You can get this information online via your account or through a written statement in the post.
- **What are your usage needs?**
How much energy do you require per month? Does it vary?
- **Are you under a fixed term contract?**
It is important to find this out before switching so as not to breach the terms you have agreed to.
- **Payment? How do you currently pay your bill?**
Does it suit you to pay-as-you go, or do you prefer to pay every 2 months? Different suppliers will have different options available.

Step 2:

- **Shop around.**
Look at what other suppliers can offer you if you are not happy with your current provider..
- **Use price comparison websites.**
If possible, use online resources to get the price that is right for you. These websites do the hard work for you and give you key information. They can switch suppliers for you in some cases at no cost.
- **Ensure the deal is right for you.**
As a customer shopping around, companies will be eager to get you on board. Take your time selecting and ensure the deal is right and affordable for your household needs.

Step 3:

- **Confirm your new offer.**
If you have decided to switch, you need to confirm this with your new suppliers. Check to see if it is dual-fuel (electricity and gas) or a single supply.
- **Ensure your old supplier is contacted.**
As mentioned previously, your new supplier will generally take care of this for you. Make a note of your new contract expiry date and be sure to review it at its end.

4. Heating Your Home

Now that you have selected your supplier, it is time to look at ways that you can reduce your energy usage where possible to make further savings and help the environment. While some of these actions may seem like common sense, old habits may prevent us from realizing the full potential of these energy-saving measures.

Heating

Reducing the frequency and temperature at which we heat our homes is an easy way of reducing energy usage and costs. Not all areas of a household are in use at any one time, meaning we do not need to heat these areas to the same temperature as the ones we are in. Below are some tips to reduce heating usage:

- **Warm Clothes:** For those suffering from the impacts of energy poverty, it may not always be possible to turn on the heating when it is cold. Wearing thermal clothing and/or thick base layers can help to reduce the impacts of cold weather. In extremely cold weather, add extra blankets to your bed.
- **Windows and Doors:** Open windows and doors between rooms can create draughts. Close them to prevent heat escaping. Draw your curtains early in the evening. Use draft excluders..
- **Thermostat:** If you have a thermostat, set it to 20°C for the areas most lived in. By lowering the thermostat temperature by just one degree, a heating bill can be reduced by up to 5%. Bedrooms and hallways should naturally be cooler than lived-in areas (16-18°C).
- **Boiler Thermostat:** If your boiler at home is a condensing model, the turning down of the thermostat to the lowest possible heating level ensures that the boiler operates in maximum condensing mode, where heat is absorbed from the flue gas and transferred to the heating system.
- **Regular Service:** Ensure your boiler is serviced at regular intervals and at least annually. This will ensure it remains in proper working order.
- **Timed control:** Having a timer control the heating and hot water systems of your home will ensure their operation matches occupancy requirements.
- **Cleanliness:** Ensure your back boiler and stove are kept clean. The removal of ash and soot will improve heat absorption and efficiency.
- **Hot water:** Set your water heating to the correct temperature, ideally 60°C. Energy can be wasted by unnecessarily overheating water. For further efficiency, insulate the hot water pipes and your cylinder with a lagging jacket..

Household Appliances

The average Irish household has over a dozen electrical appliances. Some of these, when left plugged in or switched on, consume vast amounts of energy. It is important to be aware of the energy usage of our appliances and what the big consumers are.

Modern household appliances come with an energy rating (A-G) and handbook that specifies their amount of energy usage. An A-rated appliance is considered extremely efficient, while a G-rated appliance is deemed a big energy consumer. The higher the kWh, the more energy it will use.

If you are looking to upgrade your old appliances, look to get the most energy efficient replacement within your budget. Below are some examples of typical household items and their running costs.

Watt uses what? - Typical household electrical consumption

| Appliance | Energy (kWh) | Daily Cost (0.43c per kWh) | Based upon: | Yearly Running Cost* |
|-------------------------|--------------|----------------------------|-------------------------------------|----------------------|
| Electric Shower | 9 | €0.65 | 10-minutes of use for 1 person | €237.25 |
| 120L Immersion Cylinder | 3 | €2.58 | 2 hours of heating from cold to hot | €941.70 |
| Tumble Dryer | 3 | €1.38 | 1 hour of drying | €503.70 |
| Electric Kettle | 2.5 | €0.36 | 20 minutes of boiling | €131.40 |
| Electric Oven | 2.5 | €1.08 | 1 hour of cooking | €394.20 |
| Hairdryer | 2 | €0.14 | 10 minutes of drying | €51.10 |
| Toaster | 1.5 | €0.1 | 10 minutes of toasting | €36.50 |
| Dishwasher | 1.5 | €0.65 | 1 hour of use | €237.25 |
| Microwave | 0.9 | €0.07 | 10 minutes of use | €25.55 |
| Television | 0.2 | €0.36 | 4 hours of use | €131.40 |
| Total | | €7.37 | | €2,690.05 |

*if all appliances are used daily

A good mantra to remember when it comes to appliances is:
“IF IT MAKES THINGS HOT, IT COSTS A LOT!”

Appliances such as the electric shower and ovens are big energy consumers. Using these in a conservative manner where possible will help to lower your energy bills. The time of day you are using electricity also matters. Electricity is at the highest demand between 7am-9am and 4pm-7pm. Some appliances have built-in timers where they can automatically turn on and off at set times. By using these timers, additional savings can be made.



Travel

Anyone who drives a vehicle is aware of the rising costs of diesel and petrol. For some, the car is a necessity that cannot be substituted just yet. However, for many of us, an alternative, cheaper method of transport is possible. 70% of trips that are 15 minutes or less in Ireland are made by car. From a climate, economic and health perspective, we need to reduce this figure.

Walk or Cycle

The simplest way of reducing your travel-related energy spending is to walk or cycle where possible. Walking and cycling not only reduce your emissions and expenses, they also improve your physical and mental wellbeing. It is a cost-effective way of looking after yourself and the environment. Bike rental services are available in the city and near Greenway routes in the county. Many employers operate a bike-to-work scheme.

Waterford City and County Council has a dedicated Active Travel Team who are working on upgrading the walking and cycling infrastructure throughout Waterford. The Active Travel programme will pursue the development and delivery of high-quality walking and cycling facilities for use by people of all age groups in everyday life.

A new TFI bike service has recently launched in Waterford City. Stations are conveniently located around the city making it easy to cycle to and from your destination. More information on the service is available at www.bikeshare.ie.

Public Transport

Where possible, use public transport. Thanks to recent and ongoing reductions, the affordability of bus and train travel is greater than ever before. By using the bus or train, you are alleviating traffic on roads, reducing emissions and saving money. Avail of a leap card for greater reductions on fares. A student leap card is also available.

For more rural areas in Waterford, Local Link bus services are available. Some routes operate multiple times per day. See www.localinkwaterford.ie for more information.

The National Transport Authority is also currently drafting a Waterford Metropolitan Area Transport Strategy. This will transform routes in the city and surrounding areas.

Car-pooling

For those who are rurally isolated or situated far from public transport routes, the car may be the only method of reliable transport. Carpooling with neighbors, colleagues, friends or family could reduce costs. Public transport routes are in the process of being upgraded nationally at present. It is hoped that in the coming years, everyone in Ireland will be able to make some or all of their journey via bus or train.

Home Energy Upgrades

We have looked at some of the ways in which changes to our daily energy usage can produce “little wins”. Now, we will look at some measures in the form of home energy upgrades and implementation of smart technologies. Upgrading the energy efficiency of your home can improve comfort, increase savings, reduce your household emissions and add value to it.

BER Assessment

The carrying out of a Building Energy Rating (BER) Assessment on a home is the first step energy upgrade process. The Energy Rating Certificate will tell how energy efficient your home is and the BER Rating advisory report will highlight energy saving measures that can be implemented to reduce energy consumption. In some cases your home may have an existing BER. This can be checked on the SEAI National BER Register (ndber.seai.ie).

A BER assessment is carried out by an independent SEAI registered assessor, who are listed on the SEAI website. Upon appointment you will need to provide your assessor with some information to help with the assessment. The SEAI have a checklist of what is needed as well as a full breakdown of the overall process on their website to get you started.

Home Grants

As part of the National Climate Action Plan 2021, Ireland has set a target of upgrading 500,000 homes to a Building Energy Rating (BER) of B2 or higher by 2030. To facilitate this transition over the next decade, the government has unveiled a new National Retrofitting Scheme. This is a package of supports to make it easier and more affordable for homeowners to undertake home energy upgrades. The total investment up until 2030 is projected to be €8 billion.

Free Home Energy Upgrades

If you are in receipt of certain State welfare payments, you may be entitled to free home energy upgrades. As of 8th February 2022, the scheme will target the worst performing properties, by prioritizing that were built and occupied before 1993. They also must have a pre-works Building Energy Rating of E, F or G. Applicants who have previously availed of support schemes are eligible to apply again for even deeper retrofitting measures. The scheme is now also extended to cover those in receipt of disability allowance for over 6 months and who have a child under 7 years. Upgrades offered include:

- Attic insulation.
- Cavity wall insulation.
- External wall insulation.
- Internal wall insulation.
- Secondary work such as lagging jackets, draught proofing and energy efficiency lighting.
- In certain cases, a heating system upgrade.

Eligibility Criteria:

- You must own and live in your own home.
- Your home was built and occupied before 2006.
- You are in receipt of one of the following welfare payments: Fuel Allowance.
 - » Fuel Allowance.
 - » Jobseekers Allowance.
 - » Working Family Payment.
 - » One-parent Family Payment.
 - » Domiciliary Care Allowance.
 - » Carers Allowance and live with the person you are caring for.
 - » Disability Allowance for over 6 months and have a child under 7 years of age.

All information relating to the free home energy upgrades is listed on the SEAI website under Free Home Energy Upgrades.



Individual Energy Upgrade Grants

SEAI offers a range of energy upgrade grants that can be solely managed by the homeowner or landlord applying. An individual energy grant upgrade may be suitable for homeowners and landlords who want:

- Individual energy upgrades.
- Management of their own project.
- To apply for the grant themselves.
- To pay for the full cost of works and draw down the grant.

Property Eligibility Criteria:

- Home must be built and occupied before 2011 – for insulation and heating controls.
- Home must be built and occupied before 2021 – for heat pumps and renewable system.

Contractor Selection:

If you are applying for the grant yourself you must select a contractor. This contractor must be registered to undertake works being carried out and put a contract in place with you before work commences. There is a list of contractors on the SEAI website.

For a step-by-step guide through the process and for further information, please refer to the SEAI website.

One Stop Shop Service

This service, facilitated by SEAI, will offer homeowners a no-nonsense, start-to-finish management service. This will include options on access to financing and the provision of reliable contractors to carry out the works.

Property Eligibility Criteria:

- Was built and occupied before 2011 for insulation, heating controls and renewable system grants.
- Has an existing BER of B3 or lower and must achieve a minimum rating of B2 on work completion, with a 100kWh/m²/year or better improvement on the BER primary energy value.
- Has not previously received grants for the same home energy upgrades.

For additional information on these grants, please refer to the SEAI website.

Energy Efficient Technologies in the Home

Insulation

Smart energy technologies in the home can be a great way for a household to manage and reduce energy consumption. However, in order to maximise their potential, these technologies should ideally operate in a home that is already well insulated. A poorly insulated ceiling can result in a home losing up to 30% of its heat. To protect your home against this loss, attic insulation is recommended. This is considered the most cost-effective way of upgrading your home. Other forms of insulation include cavity wall, external wall, internal and floor. The SEAI offers grant supports for these upgrades. The amount is dependent on the type of home you live in and what insulation you require.

Insulation / Building Fabric Upgrade Grants Offered by SEAI:

- **Attic Insulation:** Considered the most cost-effective upgrade made to a home.
- **Cavity Wall Insulation:** Injected from the outside with insulation.
- **Internal Insulation:** Boards are fitted to the internal walls for heat retention.
- **External Wall Insulation:** Insulating material is fixed to the outer walls of the home.
- **Windows and Door:** In certain cases window /door upgrades can be funded.
- **External Wall Insulation:** Insulating material is fixed to the outer walls of the home.

More information on insulation and the grants provided for each category are available on the SEAI website.

Heat Pumps

You may have heard of heat pumps but may not be familiar with how it operates. Heat pumps are suitable for most modern Irish homes and operate efficiently and effectively to meet energy needs.

An air-water Heat Pump acts as a fridge in reverse. The heat pump extracts energy from the air in the outside environment and is upgraded via a refrigeration cycle in order to provide domestic heating and hot water.

Ground source and water source heat pumps are less common than the air source ones. Heat is usually drawn from the ground via collector pipework and transferred to the installed heat pump. Ground water heat pumps are known to be more efficient than air-water heat pumps because energy from the ground is less impacted by weather conditions.

Coefficient Performance of a Heat Pump (COP):

The COP (Coefficient of Performance) is the ratio of electrical energy consumed by the heat pump to usable energy produced. The COP for a heat pump is the ratio of the energy transferred for heating to the input energy used in the process. The higher the COP the lower the operating costs therefore the lower the utility bills. Heat pumps usually have a COP of around 3.5:1. This makes them highly efficient.

Average Cost of a Heat Pump:

Heat pumps cost on average between €12,000–€18,000. This is inclusive of installation. For a larger home of 500m² or more, bigger systems are available. These may cost between €15,000–23,000.

Government support schemes are available for homeowners to install heat pumps. For further information, please refer to the SEAI website.

Solar PV

Solar PV technology is the conversion of sun light into electricity via a Direct Current (DC) flow of electricity from typically roof mounted panels. Through a device called an inverter, this current is switched from a Direct Current (DC) to an Alternating Current (AC), making it suitable for use in our homes.

Solar panels can be installed for residential use and have many benefits. They can be used to heat water, power appliances and charge electric vehicles. You can store excess energy generated using a battery system or export it back onto the grid for payment from your energy supplier. A Clean Export Guarantee (CEG) has been in operation since July 2022, allowing those with solar PV and other microgenerators to receive remuneration for additional electricity generated. Contact your supplier for further information on this if you believe you are eligible. A 3kW well-located solar PV system can generate up to 2,600kWh of electricity per year. This is over 40% of the average annual electricity demand of an Irish home. All of this can be achieved with very little carbon emissions.

The SEAI provide grant assistance for Solar panel installation. For full details and to see what is right for your home, please refer to their website.

Smart Heating Controls

A smart heating control is a digital heating display that interacts with your existing heating system to regulate you household's energy usage. By downloading an app related to your chosen product, you can seamlessly control the temperature of your household. You can also control your hot water. These products require a Wi-Fi connection to operate. Depending on your chosen product, these devices can range from €250–400 to purchase and install. Financing options are typically offered on these products to allow customers to spread the cost over time.

Smart Metering

Smart meters use the latest digital technology to give up-to-date details on your electricity use. In a simple digital reading, they provide you and your energy supplier with all the relevant information in relation to your billing and usage.

As part of the National Climate Action Plan, the ESB are rolling out a national smart meter programme for all of Ireland. By the end of 2024, every home and business in Ireland will have a smart meter. Once you have a smart meter, you can contact your supplier about the smart services available.

All electricity suppliers must offer you a Time of Use tariff. A Time of Use tariff is a smart service that means the cost of electricity changes depending on the time of day. This gives smart meter users the option to use energy at more cost-effective times. A Time of Use tariff will give you a rate for electricity used at peak hours, another for electricity used during the day and another for electricity used at night. Suppliers may also offer bespoke tariffs. Contact your supplier for further information.



Case Studies

It is easy to tell someone how to carry out energy-saving measures. However, they may still not be convinced by the savings. Below are some example case studies of people who have engaged in energy efficient practices and have seen the benefits.

Case Study 1 – From Traffic Jam to Cycling Man

Environmentally conscious Éamon has decided to swap his car for a bicycle. He is hoping to reduce his carbon footprint and reduce his energy costs along the way. He is also hoping to improve his general health and wellbeing.

Éamon has calculated that he lives 8 kilometres from his workplace and works about 210 days per year. Through his employer, Éamon was able to cover the cost of the €800 bicycle via the Cycle to Work Scheme. As a result of income tax, employee PRSI and USC savings, the total cost of the bike only comes to €570. The bike is repaid through deductions from Éamon's salary. Repayments can be made weekly, fortnightly or monthly depending on your salary arrangements. Talk to your employer to see if they partake in the scheme. As well as the bike, equipment such as pumps and helmets are also covered.

Below is a breakdown of how Éamon got on over the course of the working year:

| |
|------------------------------------------------|
| Cost of the bike - €570 |
| Distance travelled to work per year – 3,360 km |
| Fuel savings per annum – 185 litres |
| Money saved on fuel per annum - €379 |
| KG/CO2 saved - 570 |



Case Study 2 – Home Energy Upgrades

Mary has lived in her bungalow since the 1950s. The house has not been upgraded from its original form and Mary still relies on an open fire as her main source of heat. She is in receipt of the fuel allowance.

Mary's grandson Ted decides it is time for his grandmother to have a warm and comfortable home. He submits an application to the SEAI under the Warmer Homes Scheme. At an arranged time, a surveyor from SEAI comes to assess Mary's home.

The surveyor recommends that Mary have attic and wall insulation installed, along with low-energy lightbulbs and a new central heating system. An SEAI appointed contractor carries out the works. It is complete within a couple of weeks. All of the works are carried out at no cost to Mary.

The installer shows Ted how to use the new heating system so he can look after it for Mary until she gets to grips with it.

A post-works Building Energy Rating (BER) certificate was issued. Mary's home has gone from G-rated to B2 and is now considered energy efficient. She is delighted she can now welcome Ted into her warm home on his weekly visit.

It is important to note that in order to qualify for the Warmer Homes Scheme, the following conditions need to be satisfied:

- You must own and live in your own home.
- Your home must have been built and occupied before 2006.
- You must be in receipt of the following social welfare payments.
 - Jobseeker's Allowance for over 6 months and have a child aged under 7.
 - Disability Allowance for over 6 months and have a child aged under 7.
 - Domiciliary Care Allowance.
 - One Parent Family Payment.
 - Carer's Allowance and you must live with the person you care for.

Case Study 3 – A Lightbulb Moment

Elaine has decided she would like to improve the lighting in her home. She decided to see what was available on the market. Here is what she found:

Light Bulb Comparison

| Light Bulb Type | 60W Incandescent | 14W CFL | 10W LED |
|--------------------------------------------------------------------|-----------------------|---------------------|---------------------|
| Lifespan (hours) | 1,200 | 10,000 | 50,000 |
| kWh used per bulb over 20,000 Hours | 1,200 | 280 | 200 |
| Energy Cost per bulb for 20,000 Hours (43c/kWh) | €516.00 | €120.40 | €86.00 |
| Cost of each Bulb | €1.00 | €2.30 | €7.00 |
| Emissions over 20,000 hours from lighting (kg of CO ₂) | 1200kWh x 0.333=399.6 | 280kWh x 0.333=99.5 | 200kWh x 0.333=66.6 |

Electricity g/CO₂e/kWh = 333g

While the LEDs will cost Elaine more as an initial purchase, they are by far the most energy efficient of the 3 bulbs available. In the long run they will provide her with the greatest amount of savings from a cost and energy perspective.



Case Study 4 – Keeping well and warm

Like many households in Ireland, Alice and her family are spending a significant portion of their discretionary income on home energy. Alice is worried they will not be able to heat their home sufficiently over the winter period and is looking at supports to help her family. She decides to call into her local Waterford library branch and avail of their internet access to do some research:

As a single parent with a 5-year-old child, Alice is in receipt of the One-Parent Family Payment. This is a payment for men and women under the age of 66 who are bringing up a child under 7 alone. This qualifies her to apply for the Fuel Allowance Payment to help heat her home during the winter months.

Fuel Allowance is a means-tested payment. This means your weekly income must be below a certain amount for you to qualify. Alice satisfies the requirements.

Alice notes that the Fuel Allowance is paid from the end of September to April each year. This is 28 weeks. The fuel allowance each week from October 2021 is €33. The total fuel allowance paid over the 28 weeks is €914. This rate will remain the same for 2022, with a once-off payment of €400 to be paid in November. Alice can apply for weekly payments over this period or can receive the payment in two lump sums.

With this information, Alice calls into her local social welfare office in Waterford City with her application form. She is hopeful that the payment will ease some of the worries regarding fuel use for her and her family over the winter months.



Tips and Terms

Quick Tips:

Check what bulbs you are currently using for lighting your home. LED bulbs are far more efficient than CFLs and can cost as little as €10 to purchase. Start with replacements in the kitchen and lived in areas.

Consider using heat reflective wrap behind radiators. This wrap will reflect heat back into the room. It can usually be bought by the roll in hardware stores. This wrap can be purchased for €10.

If your chimney is not in use, consider a chimney balloon. This is a device that will reduce the heat loss caused by an unused chimney. It will cost you €15-€30.

Try to avoid blocking heat sources with furniture or other objects. This will ensure rooms can be heated properly.

Reduce your use by turning off lights in rooms you are not using.

Utilize full loads in the dishwasher and washing machine. For clothes, if it's not dirty, wash it at 30°C. Newer appliances usually have an eco-mode that can run loads at lower and more efficient temperatures.

When cooking, avoid repeatedly opening the oven door. You can lose around 20% of the heat when the door is opened. The oven will have to reheat itself once opened and this will cost more energy.

If you are working from home, remember to unplug your laptop and monitors when finishing work. Most laptop models will last almost a full workday on a full charge. Appliances on standby can make up almost 7% of a home's energy usage.

Use the correct sized pan for your hob. A large pan or pot for a small amount of food will take longer to heat. Use lids to contain heat.

Try and take what you need from the fridge in one go. Every 10-20 seconds a fridge door is open, it can take up to 45 minutes for it to cool down to its original temperature.

Don't overfill the kettle. Boil what you need.

Switch off standby. If an appliance is not in use and on standby mode, it can still use up to 20% of the energy it requires when on.

Take your own meter reading for a more accurate bill. A step-by-step guide to doing this is available online.

Glossary of Terms

- **Appliance Rating:** This is an A-G ratings scale that measures the energy efficiency of an appliance. An A-rated appliance is considered extremely energy efficient with low running costs, whereas a G-rated appliance is considered an “energy guzzler” and is costly to run. Air Tightness - The level of air that enters and leaves a home. An airtight home is a warmer home as less heat is escaping.
- **Air Tightness:** The level of air that enters and leaves a home. An airtight home is a warmer home as less heat is escaping. Coefficient of Energy – A ratio of useful heating and cooling provided compared to the work required to produce the energy. The COP of a heat pump is 3.5:1, making it highly efficient.
- **BER: Building Energy Rating.** This is a ratings scale from A-G that indicates the energy performance of a house. An A-rated house is considered extremely energy efficient, whereas a G-rated home is considered poorly insulated and inefficient.
- **Coefficient of Energy:** A ratio of useful heating and cooling provided compared to the work required to produce the energy. The COP of a heat pump is 3.5:1, making it highly efficient. .
- **Energy Mix:** The combination of energy sources that make up national use.
- **Energy poverty:** When a household is unable to heat and keep their home warm and secure a supply of energy services at an affordable cost. This may include heating, lighting and cooling.
- **Fuel Allowance:** A payment provided by the Government of Ireland to help qualifying households heat their homes during the winter months.
- **Fuel Poverty:** Directly associated with the costs of heating only. It is an inability of a household to adequately heat their home and/or keep it heated to an acceptable standard.
- **Heat Pump:** A device that transfers heat from the ground or air and increases it to a more suitable temperature to heat or cool a home.
- **Internal Wall Insulation:** Also referred to as “drylining”, this involves fixing an insulation board to the interior walls of a house and covering it with a vapor layer and plasterboard for increased heat retention.
- **Kilowatt:** A kilowatt-hour, or “kWh” for short, is a unit of measurement used by energy suppliers to work out how much a household has to pay over the course of their billing period.
- **Lagging Jacket:** A thick and padded cover that goes around your water heater to keep additional heat in. They can give up to a 60% heat loss savings.
- **LED Bulb:** LED stands for “Light Emitting Diode”. These are highly-energy efficient compared to traditional lightbulbs, are low-cost to purchase and can reduce energy bills and consumption.
- **MPRN:** Meter Point Reference Number. A unique 11-point digit number assigned to every electrical connection in Ireland.
- **SEAI:** The Sustainable Energy Authority of Ireland.
- **Solar PV:** Photovoltaic devices such as solar panels on roofs convert sunlight into electrical energy.
- **Smart Meter:** Smart meters use the latest digital technology to give up-to-date details on your electricity use. In a simple digital reading, they provide you and your energy supplier with all the relevant information in relation to your billing and usage. By the end of 2024, every home and business in Ireland, through the ESB, will have a smart meter.

Useful Links

Climate Action Regional Office
www.caro.ie

Climate Jargon Buster
climatejargonbuster.ie

CRU Energy Saving Advice
www.cru.ie/home/energy-saving-advice

Cycle to Work Scheme
www.revenue.ie/en/jobs-and-pensions/taxation-of-employer-benefits/cycle-to-work-scheme.aspx

Local Link Waterford
www.locallinkwaterford.ie/bus-timetables

National BER Register
www.ndber.seai.ie/pass/ber/search.aspx

National Climate Action Plan 2021
www.gov.ie/en/publication/6223e-climate-action-plan-2021

National Retrofit Plan
www.gov.ie/en/publication/5052a-national-retrofit-plan

Reduce Your Use Campaign
www.gov.ie/en/campaigns/6ca43-reduce-your-use

Sustainable Energy Authority of Ireland
www.seai.ie

TFI Smarter Travel
www.nationaltransport.ie/tfi-smarter-travel

Waterford Active Travel
www.waterfordcouncil.ie/departments/roads-parking/active-travel/index.htm

