



# Think Energy

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## **Guide to Home Energy Savings**

Simple tips to get  
you saving today

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# Acknowledgement

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A special thanks goes out to the Sustainable Energy Authority of Ireland (SEAI) and the Department of Communications, Climate Action and Environment (DCCAE), for their valuable support in developing this guide.

SEAI provide grants to help you upgrade your home's energy efficiency to make it more comfortable and cheaper to run. All owners of homes built before 2006 are eligible, and these grants cover about a third of the cost of measures for roof and wall insulation, boiler upgrades with heating controls and solar heating. Go to [www.seai.ie/grants/home-grants/](http://www.seai.ie/grants/home-grants/) or call **1850 927000** for more information.

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# Background

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This version of the Guide to Home Energy Savings was developed by Codema, on behalf of the Sustainable Energy Authority of Ireland (SEAI) and the Department of Communications, Climate Action and Environment (DCCAE). Codema is Dublin's energy agency, and works with the four Dublin local authorities to help them improve their energy efficiency and reduce carbon emissions in the Dublin region.

This guide was created to complement the Home Energy Saving Kit, which is available to borrow free-of-charge from a selection of public libraries across Ireland. For more information, and to download this guide, go to [www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit).



# Introduction

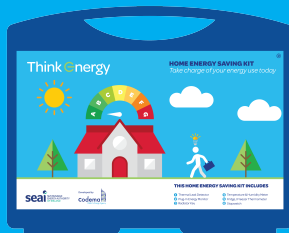
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The aim of this guide is to help you make your home more comfortable while saving money on your energy bills. A range of energy saving guides in the past have been developed to suit home owners and are only accessible to the techy-minded people among us. However, you don't have to be an engineer to understand the energy use of your home!

Whether you are renting accommodation or own a house, it is important that you are comfortable in the place you call HOME! And of course your utility bills shouldn't break the bank either! So why not start with the top energy saving tips provided in this guide or choose from the list of no, low, medium or high cost measures to find out how you can make your home more energy efficient.

## Remember - every change, no matter how small, will make a difference!

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If you'd like to get a better understanding of where you currently waste most energy in your home, why not borrow a Home Energy Saving Kit.

For more information on the kits and whether they are available from your local library branch, visit:

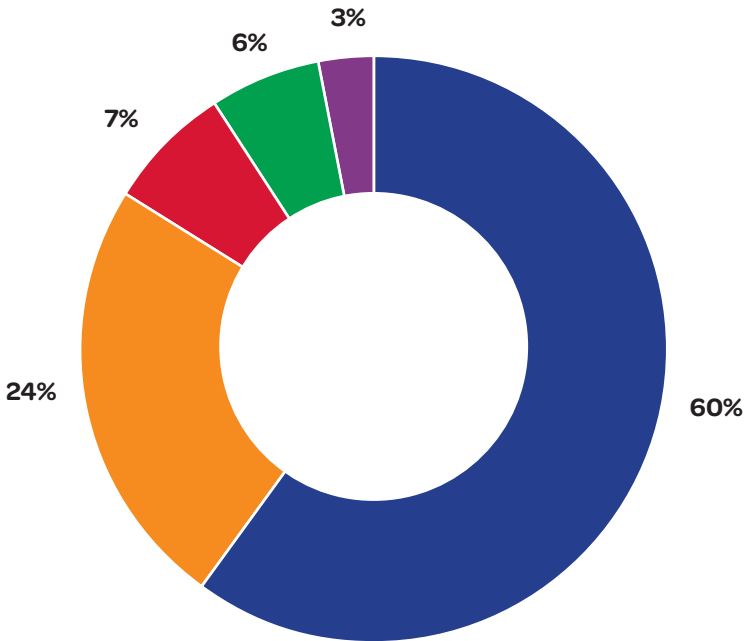
[www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit).

# How do we use energy at home?

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The Guide to Home Energy Savings provides useful energy saving tips for key areas in your home. The pie chart below provides an overview of the average energy use in an Irish home.

When starting to implement energy efficiency measures, focus on the largest energy users to make the most savings!



- **Space Heating**
- **Domestic hot water**
- **Electrical Appliances** (TV, laptop, kitchen appliances, etc)
- **Lighting**
- **Cooking**

# Understanding the references in this guide

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This guide is filled with handy tips on how to save energy at home. The cost scale below gives a simple indication of how much the energy-saving measure costs to implement. The Top Tips in each section of the guide are energy-saving measures that don't cost you anything and also contribute to the most energy-savings.

The "SEAI Grant Available" icon shows where there is a SEAI grant available for the energy-saving measure.

The blue tool icons indicate which corresponding tool(s) from the Home Energy Saving Kit can help you address a particular area in your home.

-  **Free**
-  **Low Cost**
-  **Medium Cost**
-  **High Cost**
-  **SEAI Grant Available**



**Fridge/Freezer Thermometer**



**Plug-In Energy Monitor**



**Thermal Leak Detector**



**Radiator Key**



**Temperature & Humidity Meter**

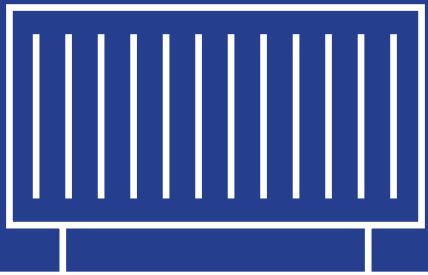
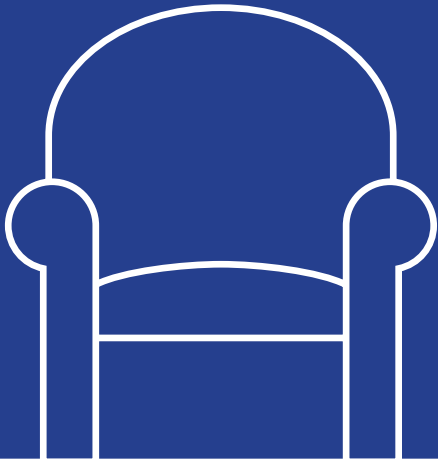
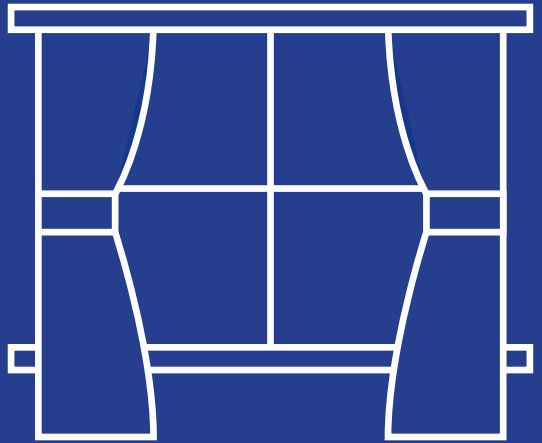


**Stopwatch**

# Section 1

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## Space Heating





# Section 1 – Space Heating

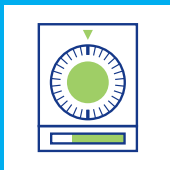
## Temperature

### Top Tips

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Free



**Use a heating timer** to set the heating times. Ensure that the heating is turned off when leaving the house and remember that radiators will continue to heat your home for some time after the central heating is turned off.

2

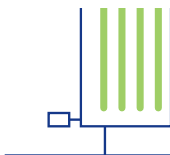
Free



**Turn down your room thermostats.** Aim for 18-20°C in your living room and 15-18°C in your bedroom.

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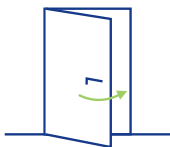
Free



**Turn your radiators down or off** in rooms that you don't use.

4

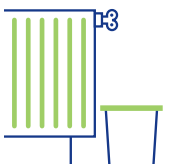
Free



**Close doors** to unused rooms so you only heat the smallest possible area.

5

Free



**Regularly bleed your radiators** using a radiator key if your home runs on a wet central heating system, as trapped air can cause your radiators to run inefficiently.

## Section 1 – Space Heating

### Temperature

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Free

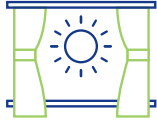


**Put on an extra jumper** or cardigan or use a blanket on the couch. You can get cold quickly from not moving around even though the temperature in your home is ideal.

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7

Free



**Make use of the sun during the winter** by opening up curtains, blinds and external shades.

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8

Free

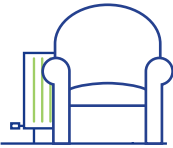


**Avoid the sun during the summer** To prevent excessive heat from entering your home, close curtains and shade windows.

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Free

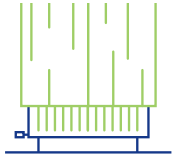


**Avoid putting furniture in front of radiators**, as this blocks heat from radiating into the rest of the room.

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**Prevent curtains from hanging over radiators** as this channels heat towards the window.

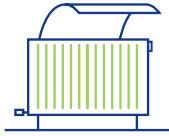
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## Section 1 – Space Heating

### Temperature

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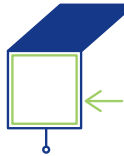
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Use **radiator foil** behind your radiators to ensure the heat is not escaping through the wall (especially when they are external walls). The foil will reflect heat back into the room. You can also use aluminium foil.

12

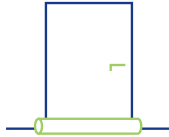
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Fit **draught excluders** around your **attic door** or consider a loft tent.

13

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You can **buy draught excluders** for your doors and windows or simply make them yourself.

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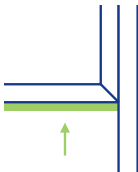
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**Decorate with carpets and rugs** to help insulate cold floors.

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Use **window seals or gap fillers** to prevent draughts around doors and windows.

## Section 1 – Space Heating

### Temperature

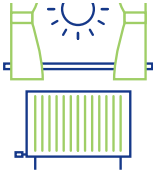
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**Buy thermal insulated curtains** for your windows and/or front door to avoid draught and heat loss. Make sure to close them at night.

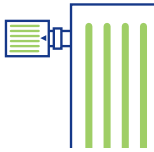
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**Place window sills or longer window ledges over radiators** which are located directly under the window to deflect heat back into the room.

18



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**Install Thermostatic Radiator Valves (TRVs)** in order to adjust the heating in each room.



Grant available as part of wider measure, see Section 8 - Next Steps.

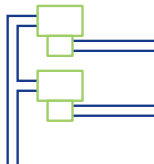
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**Get your boiler serviced** once a year to ensure it is running at optimal efficiency.

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**Fit central heating zone valves** to take control of your heating and enable you to set different temperatures in different areas of the house. This is also called zoning.



Grant available as part of wider measure, see Section 8 - Next Steps.

# Section 1 – Space Heating

## Temperature

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**Replace your windows** with more energy efficient options (double/triple glazing). You may also consider refilling or resealing your existing windows.

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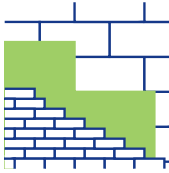


**Install new or additional attic insulation,** as you may be losing 25% of your home's heat through your roof. Ensure that joists and water tanks are covered as well.


 Grant available, see Section 8 - Next Steps.

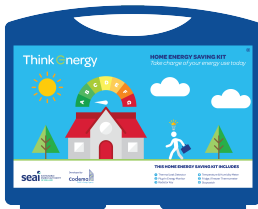
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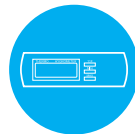


**Install new or additional wall insulation** to reduce your heating needs. Consider internal wall insulation (dry-lining) or external or cavity wall insulation.

 Grant available, see Section 8 - Next Steps.



**Why not borrow the Home Energy Saving Kit from your local library. The following energy saving tools contained in the kit may help you regulate the temperature in your home:**



To find out if the kit is available in your local library, visit [www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit).

## Section 1 – Space Heating

### Humidity

#### Low humidity tips

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**Put a bowl of water on top of your radiator**

or put a damp towel on your radiator.

Free

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**Buy plants** to purify the air in your home. Peace lilies are particularly good for air quality.

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26



**Use a ceramic humidifier** on your radiators.

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**Buy an energy-efficient humidifier** if the air in your home is very dry. Remember that the operating cost could be high, so choose an energy efficient humidifier ('A' rated).

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## Section 1 – Space Heating

### Humidity

#### High humidity tips

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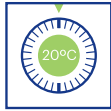
Free



**Hang up the washing outside** or make sure the room is sufficiently aired.

29

Free



**Make sure your heating is set sufficiently high.**

30

Free



**Ensure sufficient ventilation** to prevent mould growth, especially in bathrooms, which can have higher humidity levels as residual moisture remains on surfaces.

31

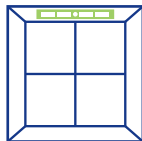
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**Buy a moisture absorber** for your room or closet. Ensure you can refill it easily.

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**Fit window vents** to ensure you have adequate ventilation.

# Section 1 – Space Heating

## Humidity

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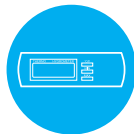
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**Use a de-humidifier** if you are experiencing damp, mould build up or condensation on your windows. Ensure to choose an energy efficient humidifier ('A' rated), as they can cost a lot of money to run.

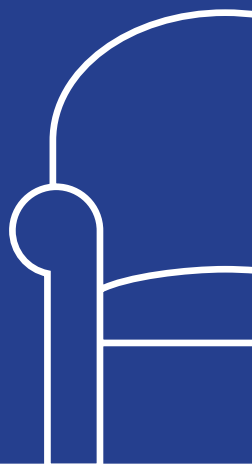
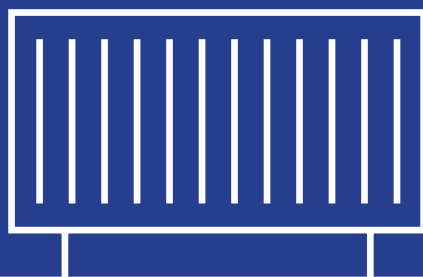
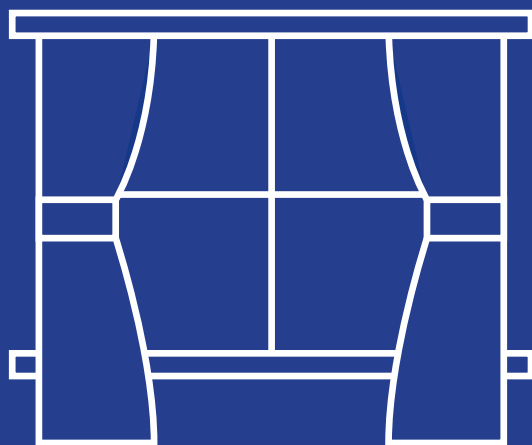


**Why not borrow the Home Energy Saving Kit from your local library. The following energy saving tool contained in the kit may help you regulate the humidity in your home:**



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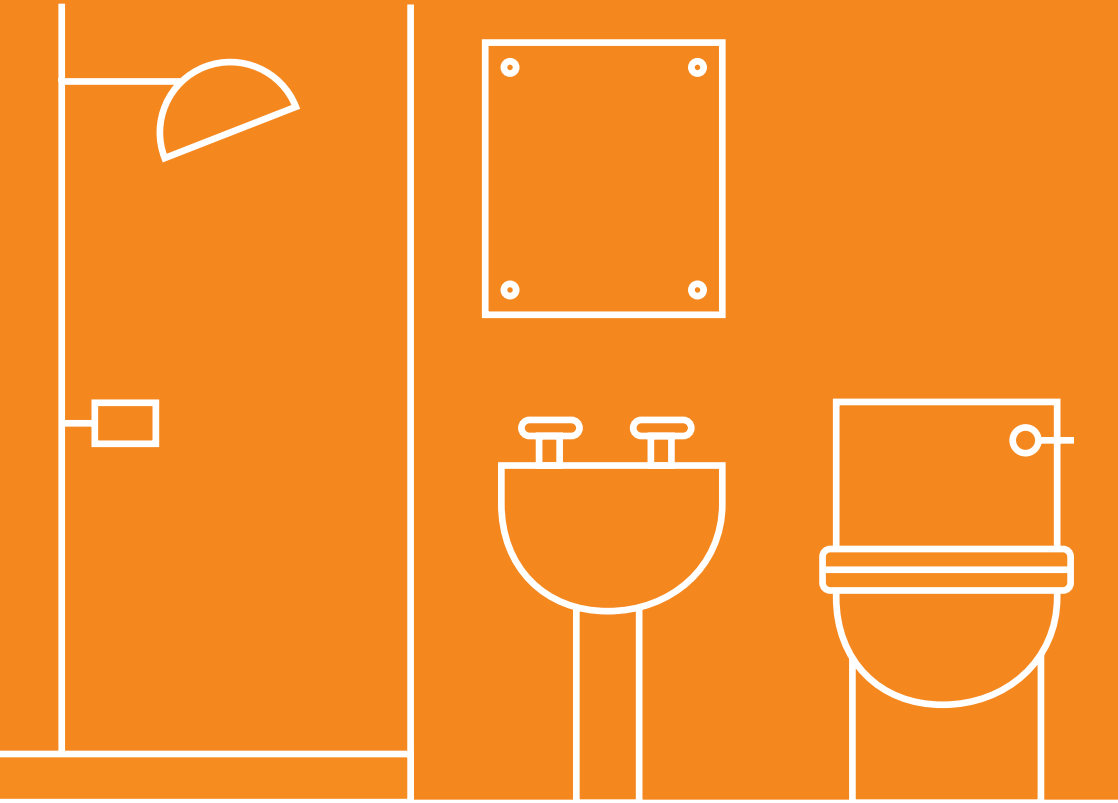




# Section 2

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## Domestic Hot Water



### Top Tips

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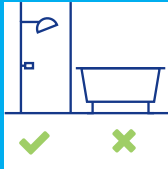
Free



**Adjust the temperature of your water heating.** Your water temperature should be set to around 65°C on your boiler and/or immersion system, so that energy is not wasted by overheating water.

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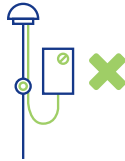
Free



**Prioritise taking a shower over having a bath.** A regular shower uses only 20% of the energy of a full bath.

36

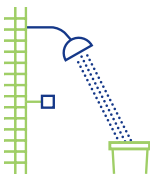
Free



**Avoid power showers** as they use 125 litres of water in less than 5 minutes. A regular shower only uses 35 litres.

37

Free



**Reduce your shower flow rate** to 9 litres per minute or less. Simply measure the flow rate with a stop watch.

38

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**Fix dripping hot taps** immediately. They don't just waste water but energy too.

## Section 2 – Domestic Hot Water

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39



**Use a shower timer** to reduce the amount of water you have to heat for your daily shower. Try to aim for 5 minutes!

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**Install aerated taps** as they reduce the water flow from your taps without reducing the water pressure.

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**Install an aerated shower head** which will save you water and energy without compromising the water pressure.

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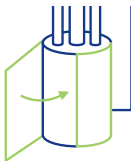
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**Insulate pipes** with foam tubing (lagging) to prevent heat loss, especially in unheated areas such as the attic.

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**Fit a lagging jacket around your hot water cylinder.** It will keep water hotter for longer.

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## Section 2 – Domestic Hot Water

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**Replace your water cylinder** with a modern, energy-efficient model which has an integrated insulation blanket.

! Grant available as part of wider measure, see Section 8 - Next Steps.

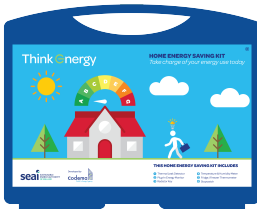
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**Consider a solar hot water** system for your roof to meet 50-60% of your hot water requirement per year.

! Grant available, see Section 8 - Next Steps.



**Why not borrow the Home Energy Saving Kit from your local library. The following energy saving tools contained in the kit may help you tackle the amount of energy you're using to heat water in your home:**

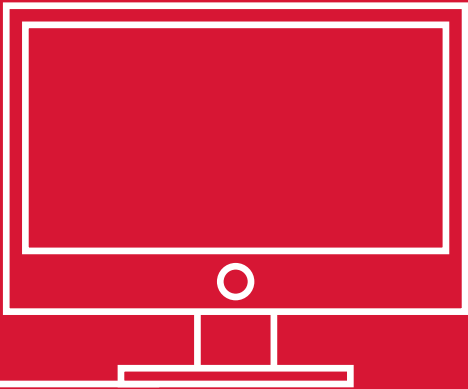
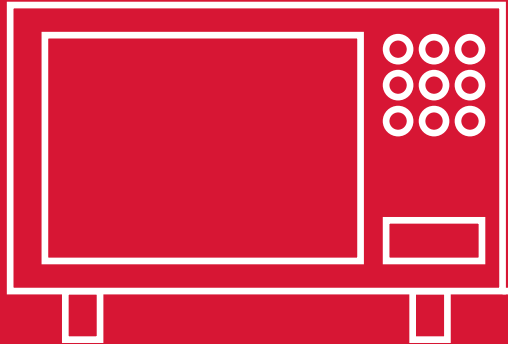


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# Section 3

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## Electrical Appliances



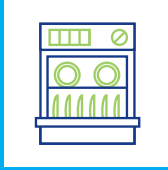
## Section 3 – Electrical Appliances

### Top Tips

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46

Free

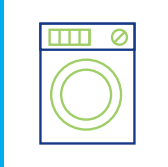


**Run your dishwasher on low temperature** and ensure it is always full before turning it on. You may need to rinse the dishes beforehand. If your electricity is cheaper at night, try to run the appliance over night to save on cost. If you can, turn off the dishwasher before the drying cycle and let the dishes air dry instead.

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47

Free



**Run your washing machine on a cooler cycle** and only with full loads to ensure fewer washes overall to reduce water and energy use.

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48

Free



**Adjust your fridge/freezer temperature.** Your fridge should be between 3-5 degrees and your freezer between -15 to -18 degrees.

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49

Free



**Put washing out to dry** and avoid the use of a dryer as they can be very expensive to run.

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50

Free



**Keep your freezer full** as it will consume less energy. You could fill it with water bottles or newspaper to achieve this.

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## Section 3 – Electrical Appliances

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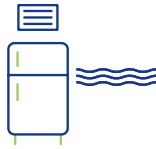
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**Defrost your fridge and freezer** at least every 6 months to ensure it runs efficiently. There should be less than 5mm of frost build up.

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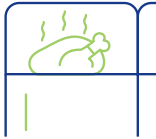
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**Move your fridge/freezer** to a cooler location if possible, away from direct sunlight or heat from your cooker, to make sure that it runs more efficiently. The area should be well ventilated.

53

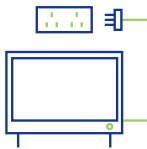
Free



**Cool hot food fully before putting it in your fridge or freezer**, as they have to work harder to chill it.

54

Free



**Turn off all appliances** at night or when not in use, as they can use a lot of energy on standby mode (e.g. TV, computer).

55

Free



**Use the energy saving mode on your computer** and ensure it is turned off fully overnight and when not in use.

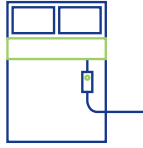


## Section 3 – Electrical Appliances

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Free



Turn on your **electric blanket for a half hour** before you go to bed and switch it off immediately when you get into bed. Don't leave it on all night!

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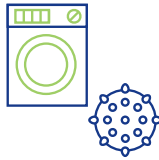
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**Boil only as much water as you need** in the kettle when making coffee or tea. You may also consider an eco-kettle, which will help you only boil as much water as you require.

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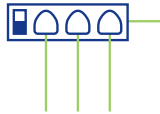
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**Use dryer balls** if you need to run your dryer to speed up drying time.

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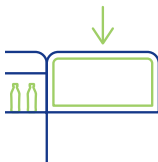
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**Buy appliance power strips** so that you can turn all appliances off at the same time. Some of these also come with a remote control, which can be useful for your TV or Christmas lights.

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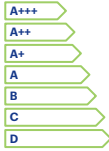


**Replace door seals on fridge or freezer** if they are worn, split or broken, as this can let warm air inside the fridge or freezer, which requires extra energy to run the appliance.

## Section 3 – Electrical Appliances

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### Upgrade appliances to A+++ rated.

Remember that low cost appliances may not necessarily work out cheaper over their lifetime.

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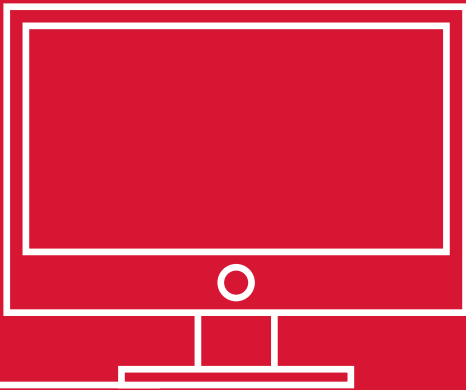
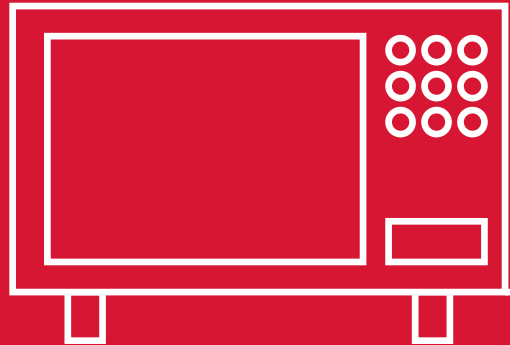
Consider solar PV panels for your home to generate free and clean electricity from the sun.



Why not borrow the Home Energy Saving Kit from your local library. The following energy saving tools contained in the kit may help you tackle the energy used by electrical appliances in your home:



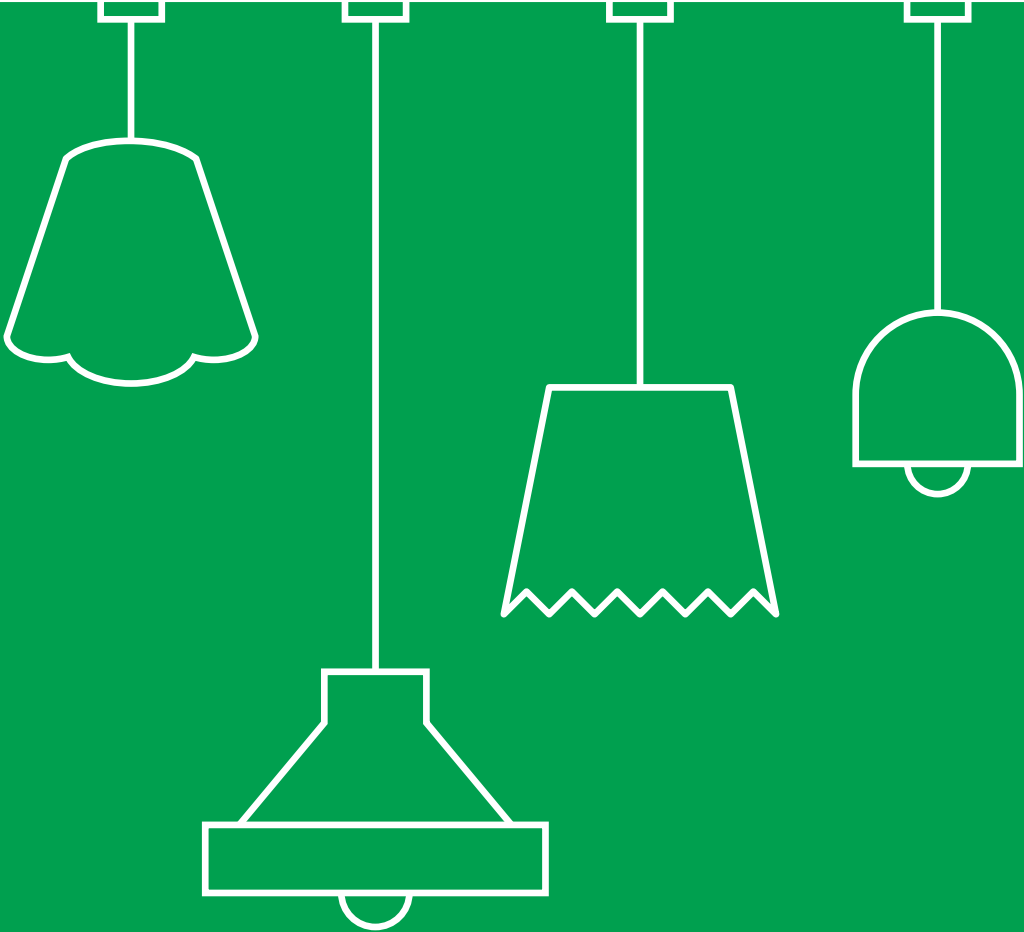
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# Section 4

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## Lighting



## Section 4 – Lighting

### Top Tips

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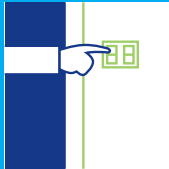
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**Maximise use of daylight.** Hold off switching on lights in the evening until necessary.

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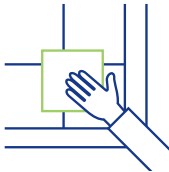
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**Turn off the lights** after leaving a room and where you don't need them.

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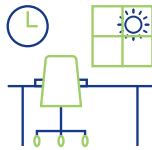
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**Clean your windows regularly** to take advantage of maximum sunlight.

66

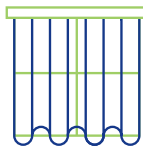
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**Furnish your room to allow maximum daylight for specific activities.** E.g. put a desk near the window for reading.

67

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**Avoid net curtains or blinds** which reduce daylight penetration of the room.

## Section 4 – Lighting

68

Free



**Clean your lights, bulbs and shades** to increase brightness.

69

Free



**Make use of task lighting.** Only use the lights that are required for the task and avoid lighting the whole room.

70

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**Use dimmer switches and multiple light switches effectively** to avoid lighting the whole room.

71

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**Use CFL or LED lights** to replace old inefficient lights. Start with the living room or kitchen where you use most energy throughout the day.

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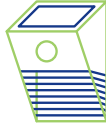
**Paint walls in bright colours** as they reflect 80% of light while dark colours reflect less than 10%.

## Section 4 – Lighting

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73

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**Consider motion sensors** specifically for outdoor lighting or hallways to reduce energy. You can also buy solar powered sensor lights, which use zero electricity and don't require cables.

74

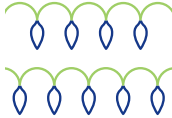
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**Install mirrors around skylights** as they can reflect sunlight into the room.

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Buy **LED or solar fairy lights** to decorate your garden or home at Christmas.

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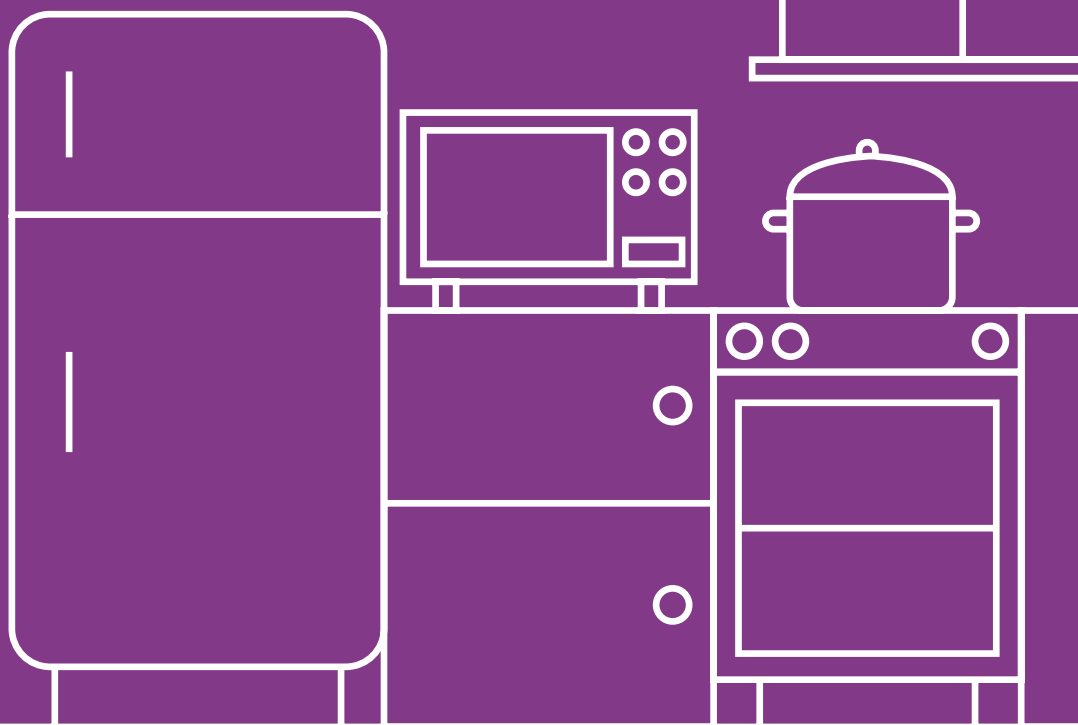


**Consider installing an energy-efficient skylight** to take advantage of natural daylight where possible. Make sure to keep it clean.

# Section 5

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## Cooking



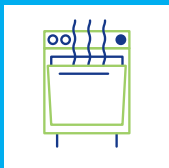


### Top Tips

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77

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**Don't open your oven door** too often when cooking, as you can lose 20% of the accumulated heat.

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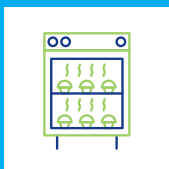
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**Cook meals together.** Aim at cooking everything at once (e.g. apple pie and lasagne). Remember that you can cook at a higher temperature at the top of the oven, and at the same time at a lower temperature at the bottom.

79

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**Make use of residual heat** by turning off the oven for the last 10 minutes of cooking time. Or simply leave the oven door open to heat your room.

80

Free



Use pots and pans that cover the whole of the **size of the cooker ring**. At a certain time of cooking, turn off the rings and use their residual heat to finish cooking.

81

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**Use lids on pots and pans** while cooking. This will speed up cooking time and save energy.

## Section 5 – Cooking

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82



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**Boil the water in your kettle** before using it for cooking. This will speed up cooking time.

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83



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**Use the toaster instead of the grill** for toasting bread.

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**Be careful in your approach to using general kitchen appliances**, e.g. food processor or sandwich maker. Make sure to only use at the correct temperature and for the required amount of time.

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**Use a microwave for smaller meal amounts** instead of using your oven or stove.

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**Keep your oven clean** to reduce cooking time.

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## Section 5 – Cooking

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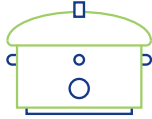
Free



**Replace door seals** of your oven if they are worn, split or broken, as this can decrease the efficiency of your oven.

88

Free



**Consider using a slow cooker or pressure cooker** as they save both energy and time while producing great food.



**Why not borrow the Home Energy Saving Kit from your local library. The following energy saving tool contained in the kit may help you tackle the energy used by electrical appliances in your home:**

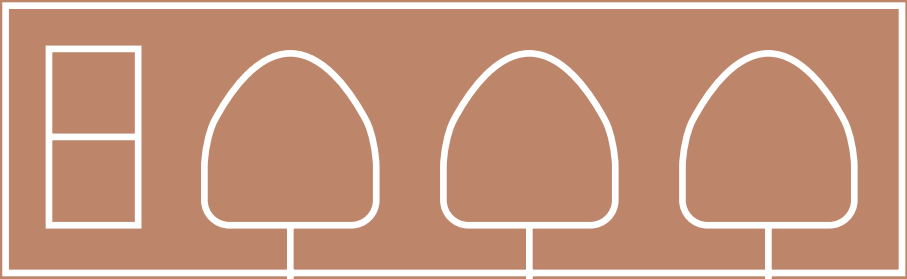


To find out if the kit is available in your local library, visit [www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit).

# Section 6

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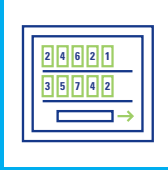
## Energy Consumption



### Top Tips

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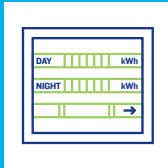
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**Read your electricity and gas meter** and submit regular readings to your utility company.

90

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**Find out what tariff you are on.** If you use most of your appliances at night, you may consider switching to dual tariff. Contact your utility company to find out what is most suited to your needs and what time the night tariff starts and ends.

91

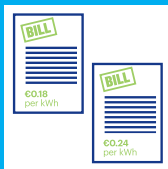
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**Read your energy bill.** Check the unit price of electricity and your current standing charge.

92

Free



**Compare tariffs of other utilities.**

You can save a lot of money by just switching providers. Simply check a price comparison website for more information.

93

Free



**Set yourself a target for energy reductions** to help you focus on implementing energy-saving measures. Why not aim for a 5-10% reduction!

94

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**Get a Building Energy Rating (BER) for your home.** See how you compare with the national average and find out what steps are needed to improve your rating.

 Grant available as part of wider measure, see Section 8 - Next Steps.

# Section 7

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## Energy Glossary



## Section 7

<b>A</b>	<b>Amp</b>	The ampere often shortened to 'amp' is the unit of electric current and is therefore used to express the flow rate of electric charge. Example: A 100 watt light bulb connected to a 120 volt line draws almost 1 amp in current.
<b>GPRN</b>	<b>Gas Point Reference Number</b>	The GPRN is a unique reference number assigned to every gas point on the natural gas network. GPRNs have up to 7 digits (Example: 2354868).
<b>K</b>	<b>Kelvin</b>	Colour temperature is a characteristic of visible light and is stated in units of absolute temperature, known as Kelvin (K). Example: A 2,700K light bulb produces a warm light whereas a 5,000K bulb will produce a colour temperature closer to daylight.
<b>kWh</b>	<b>Kilowatt hour</b>	The kilowatt-hour (kWh) is a unit of energy equivalent to one kilowatt of power expended for one hour. Example: A 1000 Watt microwave will use 1 kilowatt per hour of use, which is displayed as 1 kWh.
<b>L</b>	<b>Lumen</b>	The lumen is a unit of luminous flux, a measure of the total "amount" of visible light emitted by a source.
<b>MPRN</b>	<b>Meter Point Reference Number</b>	The MPRN is a unique 11-digit number (i.e. 10009998888) assigned to every single electricity connection and meter in the country. Each individual meter has its own MPRN.



# Energy Glossary

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<b>V</b>	<b>Volt</b>	<p>The voltage is the change in electric potential between two positions. Voltage is always measured between two points, for example between the positive and negative ends of a battery, or between a wire and ground. Appliances built for use in North America are designed to operate on 110-120V. Most of the world, however, operates on 220-240V. It is therefore important to bring a suitable adapter when travelling as failure to do so can severely damage or destroy your appliance.</p>
<b>W</b>	<b>Watt</b>	<p>The wattage of an appliance is the rate at which it uses electrical energy. This amount does not change but varies a lot across appliances. Only kWh will measure the energy consumed by the appliance over time.</p>

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## Section 8 - Next Steps

This Guide to Home Energy Savings has been developed to help you along your energy saving journey, and to complement the Home Energy Saving Kit, which is available to borrow free-of-charge from a selection of public libraries across Ireland. If you haven't already tried it, why not borrow the kit, which will help you identify the easiest and most important areas to reduce energy use in your home.

For more information on the kits and whether they're available from your local library, visit: [www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit).

SEAI provide grants to help you upgrade your home's energy efficiency to make it more comfortable and cheaper to run. All owners of homes built before 2006 are eligible, and these grants cover about a third of the cost of measures for roof and wall insulation, boiler upgrades with heating controls and solar heating. Go to [www.seai.ie/grants/home-grants/](http://www.seai.ie/grants/home-grants/) or call [1850 927000](tel:1850927000) for more information.

Once you've started your own journey, why not tell your neighbours, family and friends and start an energy saving movement in your community?

# Your energy saving journey

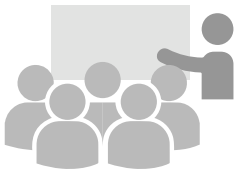
Borrow the Home Energy Saving Kit  
(more details on  
[www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit))



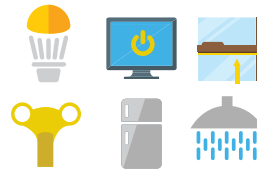
Test all 6 tools in  
your house



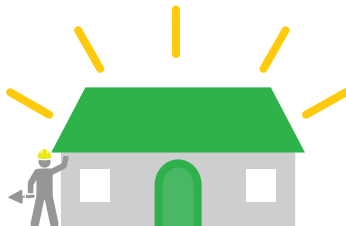
Come to one of our  
events to learn more



Take simple steps as  
suggested by the guide



€ Visit [www.seai.ie/grants/home-grants/](http://www.seai.ie/grants/home-grants/)  
to apply for grants for further measures



Get the energy  
upgrades carried out



Enjoy the benefits of a cosier  
home & lower energy bills!



# Sources

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## Sources

[www.aei.ie](http://www.aei.ie)

[www.bonkers.ie](http://www.bonkers.ie)

[www.bordgaisenergy.ie](http://www.bordgaisenergy.ie)

[www.bordgaisenergy.ie/energy-efficiency](http://www.bordgaisenergy.ie/energy-efficiency)

[www.electricireland.ie](http://www.electricireland.ie)

[www.energja.ie](http://www.energja.ie)

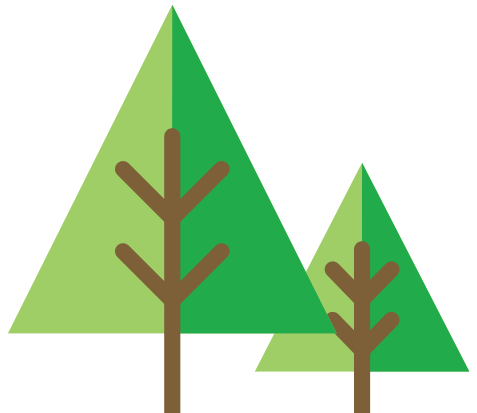
[www.epa.ie](http://www.epa.ie)

[www.flogas.ie/residential/energy-awareness](http://www.flogas.ie/residential/energy-awareness)

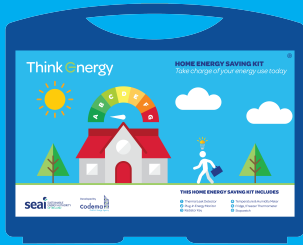
[www.pinergy.ie](http://www.pinergy.ie)

[www.seai.ie/betterenergyhomes](http://www.seai.ie/betterenergyhomes)

[www.seai.ie/Grants](http://www.seai.ie/Grants)



# Notes



If you'd like to get a better understanding of where you currently waste most energy in your home, why not borrow a Home Energy Saving Kit!

These kits are available to borrow from a selection of public libraries across Ireland. For more information on the kits and whether they are available from your local library, visit: [www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit).

**For queries regarding the kits:**

- +353 (0)1 707 9818
- [codema@codema.ie](mailto:codema@codema.ie)
- [www.codema.ie/energysavingkit](http://www.codema.ie/energysavingkit)
- [@EnergySaving Kit](https://twitter.com/EnergySavingKit)
- [www.facebook.com/EnergySavingKit](http://www.facebook.com/EnergySavingKit)

**For queries regarding grants:**

- 1850 927000
- [www.seai.ie/grants/home-grants/](http://www.seai.ie/grants/home-grants/)



# Think Energy



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**codema**   
Dublin's Energy Agency