



EnergyFact 

*Your home
energy
saving action
plan*

Sample House, Sample Street, Sample Area,
Sample Town, Sample County, XX1 1XX

Report Reference No: LV123456
Client's Name: Sample Report
Date of Report: 09 March 2021



A. About your EnergyFact Action Plan



Dear Sample,

You've just taken your first steps to improving the energy efficiency of your home. By doing so, you could reduce the amount of carbon dioxide it produces and help to reduce your fuel bills, or increase the warmth and comfort of your home, all at the same time.¹

Learning how to reduce your carbon footprint means that you can play your part in mitigating the effects of the climate emergency. If no action is taken, there will be a rise in global temperature causing many global and regional issues, including greater risk of flooding and droughts, more extreme weather events and more in-home overheating which may cause health issues in more vulnerable households.

To address the climate emergency, the UK has signed up to the Paris Agreement which set in law that we are committed to keeping the global temperature rise to less than 2 degrees Celsius, and preferably below 1.5 degrees Celsius. To achieve this, the UK government has pledged that it will become net zero carbon by 2050. This means that for all carbon dioxide emissions produced in the UK, the same amount will be removed from the atmosphere.



With UK residential properties accounting for approximately 22% of carbon dioxide emissions finding out how to reduce the carbon dioxide produced in your home means you can now play an important part in reaching these targets and tackling the climate emergency.²

Read on to find out what you can do to improve your home, reduce your fuel bills and help tackle the climate emergency by reducing the amount of carbon your home produces.

¹ Note that all carbon dioxide figures presented in this report are for carbon dioxide equivalent which means that they include the impact of other greenhouse gasses along with carbon dioxide, because carbon dioxide is not the only gas which affects climate change. We refer to carbon dioxide rather than carbon dioxide equivalent for ease of reading.

² According to the National Atmospheric Emissions Inventory, In 2018 UK greenhouse gas emissions were around 451 million tonnes of carbon dioxide equivalent (Mt CO₂e). The report goes on to confirm that UK households accounted for 100 million tonnes (excluding domestic car use).

B. Report Contents



About this report

Within this report we will give you information on the energy efficiency of your home from what you have told us about it. Based on the answers you have given, we have estimated:

- ✓ How much energy your home is using each year and what it costs.
- ✓ The amount of carbon dioxide your home produces each year.

We have also provided you with an action plan. This suggests some home improvements that could you save money on your energy bills and reduce your carbon dioxide emissions. Alongside this you can find an estimate of your home's current Energy Performance Certificate (EPC) rating, and what it could be if you carry out all improvements that we recommend, but it's important to note that this is not a replacement for an actual EPC.

We've also undertaken the following data-based risk assessments:

- ✓ Risk of flooding
- ✓ Risk of subsidence

These assessments will give you an indication of the probability of your property being affected by significant subsidence and flooding, both now, and in the future depending on how effective global actions are in tackling the climate emergency.

Finally, your action plan highlights a few things you might want to consider before making any home improvements, such as:

- ✓ How much each recommendation might cost
- ✓ The work involved to carry out each recommendation
- ✓ Other actions you could take to reduce your carbon footprint even further

C. What You Have Told Us About The Property



This is what you have told us about the property. We have used this information to drive the calculations and the advice given. We have built a model of the property based on this information and used it to calculate the potential impact each of the improvements may have.

General property details



Address and postcode

Sample House, Sample Street, Sample Area, Sample Town, Sample County, XX1 1XX

Property type

House: Detached

Property age

1950-1966

Number of bedrooms

3 bedrooms

Insulation and structure



Type of roof

A loft with a thicker layer of insulation (5 cm to 15 cm)

Main type of wall

Cavity wall - I know it has not been insulated

Ground floor construction

Suspended timber

Floor area entered

124.00 sq. metres

Type of glazing

Partially double/triple glazed

Heating



Does the home have a hot water tank?

No

Does the home have a gas connection?

Yes

Main way the home is heated

An older boiler

The type of fuel that is used

Mains gas

Does the home have temperature control valves on the radiators?

Yes

Renewable energy sources



Photovoltaics present?

No

Solar hot water present?

No

Does the home have a suitable area to install solar panels?

Yes

How large is the garden?

A small garden

Does the property have room to store wood fuel, or free space in a garage or shed?

Yes

Other information



How many people will live in this property?

3

How warm do you keep the living area?

Toasty (22 degrees celcius or more!)

Number of showers per week

14

Number of baths per weeks

1

Amount of low energy lighting installed

About half is

How many questions you answered

The information displayed in this report is based on the answers you gave us. The more information you were able to provide, the more confidence we can have in our model and the results.

The following score is based on how many times you chose an “I don’t know” option. Choosing many of these options will lead to an incremental decrease in our overall confidence. The more questions answered, the more realistic/relevant the recommendation will be.



These are the reasons your score has been reduced:

- You did not provide any actual fuel bills so we have estimated the amount the property would use in a typical year

D. Current Property Performance Summary



Based on the information you have told us about your property, we have calculated the following results which detail your energy use and how much carbon dioxide emissions the property produces.

Disclaimer

The results given are estimates and may differ from a property's actual Energy Performance Certificate (EPC), if it has one. The results provide an estimate of energy efficiency performance and indicate where improvements may be possible. **We always recommend speaking to an energy assessor or installer before proceeding with any work.**

Estimated total fuel bill for the year

£1,567

How much energy is this?

We think this property currently uses about

23,747 kWh each year



That's enough to
light 27 typical UK homes for a year

Alternatively, that's enough to
power 317 full rotations of the London Eye, or
power 200 TV's for a year

How much Carbon Dioxide does this emit into the atmosphere?

Your heating, lighting and appliances generate
around

5,159 kg of CO₂ each year



Did you know that's equivalent to
taking 3 car(s) off the road for a year?

Alternatively, that's
enough carbon dioxide to fill 461 builder's skips,
or
equivalent to driving 18,103 miles

E. Environmental Risk Factors



Disclaimer

All information is a broad indicator of an area's risk and is not specific to an individual property. The EnergyFact service uses data models to assess an area's risk. It is not possible to say what the flood risk is at any specific place or time, but we use the best information available to provide an indication. The EnergyFact report is not a substitute for an Environmental Report. If you want more information on flooding you can go to <https://www.gov.uk/check-flood-risk>, and you can also sign up for free flood warnings here <https://www.gov.uk/sign-up-for-flood-warnings>

Your home may be at risk of damage due to climate change. We have already seen a big increase in extreme weather damage across the UK in recent years. This report highlights regional variations of predicted climate change showing you the potential impact on your home.

All peril impacts are calculated at the property level to 5m accuracy. This resolution is essential because flood and subsidence risk factors can vary considerably between neighbouring properties. For example, a property which is on lower ground may have considerably higher flood risk than its immediate neighbour. Likewise, the presence of large tree within 10m of a building on shrink/swell clay will considerably increase the risk of subsidence.

Flood risk

Good to know

Flood risk is derived from the return period in years. This can be confusing and many would think a flood return period of 10 years means if your property flooded in 2021 it wouldn't be likely to flood again until 2031. This isn't true, there would be a 10% chance of your property flooding every year and it could flood more than once in any year. That's around the similar odds for matching 2 numbers in the national lottery. A 100 year flood return period has a 1% chance of occurring, similar odds to matching 3 numbers in the national lottery. To keep things simple we express the annual risk in bands ranging from negligible risk to extreme

Flood Risk	Current Risk	2050 Risk*
Up to 0.1% Negligible Risk		
0.1% - 0.2% Very Low Risk		
0.2% - 1% Low Risk		
1% - 3.3% Medium Risk	Current	
3.3% - 4% High Risk		
4% - 10% Very High Risk		
Greater than 10% Extreme Risk		2050

*assuming no CO₂ reduction

If your property is in the medium band or above we recommend you check whether the property has flooded in the past and that home insurance can be obtained on normal terms. We would also recommend you seek further professional advice. For more information on flooding visit the 'Know Your Flood Risk' website at: www.knowyourfloodrisk.co.uk.

Flood risk vs Potential Climate change by decade

The implication of climate change and consequential risk

Climate Change will increase the risk of flooding in the future because of wetter winters and more concentrated rainfall events. To help you understand the risk to you we confirm the flood risk in the 2030s, 2040s and 2050s across 3 different climate scenarios which are modelled against forecasted global temperature increases by the year 2100.



High emission scenario

The world takes no action. A 3.4°C - 6.2°C increase



Medium emissions scenario

All signatories implement Paris Accord. A 2.5°C - 4.7°C increase



Low emissions scenario

A significant global reduction. A 1.4°C - 3.2°C increase

High emissions scenario



Medium emissions scenario



Low emissions scenario



Scenario

	Decade		
	2030	2040	2050
High risk	High risk	Very high risk	Extreme risk
Medium risk	Medium risk	High risk	Very high risk
Low risk	Low risk	Medium risk	High risk

Subsidence risk






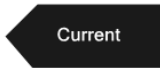

Good to know

Subsidence is downward movement of the ground beneath the buildings. It occurs when there is a failure of the foundations of a property due to ground movement. This can be caused by clay soil drying out and not supporting the foundation above, or sub soils being washed away by leaking drainage. This can result in cracking in the walls above the foundations which, if significant, can compromise the stability of the wall.

Why is climate change a risk?

Hotter, drier summers will increase the potential for subsidence, particularly on shrink/swell clay. The dry summer of 2018 caused exceptional subsidence losses for insurers; it was reported that claims made between July and September were the highest level seen for 12 years. In all, more than 10,000 households were said to have made claims that totaled more than £64m, with shrink/swell clay being cited as a principal risk factor, in addition to the proximity of large trees.

As with flood risk, subsidence risk is expressed in return periods. To keep things simple we have expressed the annual risk to your property in bands ranging from negligible risk to high risk.

Subsidence Risk	Current Risk	2050 Risk*
 Negligible Risk  Very Low Risk  Low Risk  Medium Risk  High Risk	 Current	 2050

*assuming no CO₂ reduction

Worried about structural movement?

There are different types of movement and they commonly fall within the following categories: Settlement, Subsidence and Heave. We've already provided some information on subsidence so let's look at the other two forms of movement.

Settlement

Settlement is downward movement caused by the soil being compressed by the weight of the building(s). It is commonly caused when a property is altered or extended. Though settlement can also be a result of cracking to external walls, usually above larger openings. This can occur where lintels above the opening have either moved on old mortar beddings, or in some cases failed as the steel reinforcement has rusted, comprising the ability of the lintel to support the masonry above.

Heave

Heave is an upward movement of the ground beneath building(s) as a result of the soil expanding. It is important to note that the complete removal of trees can make the problem worse. Heave is typically found in areas of shrinkable clays where the soil can recover and swell following a period of dry weather.

What About Home Insurance?

Insurance policies generally cover damage caused by **subsidence, heave or landslip**. Please note that this is repair of the **damage caused** rather than rectifying what caused the damage to begin with, which may leave you with **out of pocket expenses** (costs that the insurance company won't reimburse). Policies often omit damage caused by **settlement** (movement caused by the adjustments of the different materials/land the property sits on.) If this is the case, then the cost of the repairs may fall entirely on you as the owner of the property.

Concerned?

If you are concerned about subsidence or other forms of building movement a Countrywide Home Survey can give you piece of mind. **For a free consultation please contact us at 01332 813041 or visit our website at countrywide.co.uk/surveying**

Subsidence risk vs Potential Climate change by decade

The implication of climate change and consequential risk

To help you understand the risk to you we confirm the subsidence risk in the 2030s, 2040s and 2050s across 3 different climate scenarios which are modelled against forecasted global temperature increases by the year 2100.



High emission scenario

The world takes no action. A 3.4°C - 6.2°C increase



Medium emissions scenario

All signatories implement Paris Accord. A 2.5°C - 4.7°C increase



Low emissions scenario

A significant global reduction. A 1.4°C - 3.2°C increase

High emissions scenario



Medium emissions scenario



Low emissions scenario



Scenario

	Decade		
	2030	2040	2050
High emissions scenario	Low risk	Low risk	Medium risk
Medium emissions scenario	Very low risk	Low risk	Low risk
Low emissions scenario	Very low risk	Very low risk	Low risk

F. Areas For Potential Improvement



In this section we tell you which areas of the property may have potential for further improvement based on the information you have provided. These areas are not currently meeting the best performance or energy efficiency possible. The performance ratings given relate only to the energy efficiency of the area of the property, and do not take into account such things as disrepair.

Areas most likely in need of improvement

These are the areas of your property which we think would benefit the most. This is because their estimated performance rating is low. You may wish to consider investigating and improving these areas as a priority to maximise potential fuel bill and carbon dioxide savings.

	Current estimated performance rating
Walls	★ ★ ★ ★ ★
Floor	★ ★ ★ ★ ★
Glazing (single)	★ ★ ★ ★ ★
Hot water	★ ★ ★ ★ ★




1 star = very poor (least efficient) / 5 stars = very good (most efficient)

Other parts of the property

These areas of your property are already being estimated as having a good energy performance rating. However, this does not necessarily mean you cannot make further improvements. Based on what you have told us about the property, if we think there are any areas for further improvement we will make recommendations in your action plan.

	Current estimated performance rating
Roof	★ ★ ★ ★ ★
Glazing (double or triple)	★ ★ ★ ★ ★

Property Address: Sample House, Sample Street, Sample Area, Sample Town, Sample County, XX1 1XX

	Current estimated performance rating
Main heating	
Heating controls	
Lighting	

1 star = very poor (least efficient) / 5 stars = very good (most efficient)

G. Your Action Plan



Your action plan summarises the cost, potential fuel bill and carbon dioxide emission savings you could achieve if you were to follow all of the recommendations given. The recommendations are split into three categories:

- Quick wins & simple changes,
- Insulation & structural improvements
- Heating system upgrade

Disclaimer

The results given are estimates and may differ from a property's actual Energy Performance Certificate (EPC), if it has one. The results provide an estimate of energy efficiency performance and indicate where improvements may be possible. **We always recommend speaking to an energy assessor or installer before proceeding with any work.**

Plan summary

This summary shows the total potential fuel bill and carbon dioxide savings that might be achieved if you were to carry out all recommendations. This summary also includes any other income sources you may receive from government schemes if applicable.

Rough cost of the improvements

about £8,462

Potential fuel bill saving with the improvements

About £613 per year

Fuel cost without improvements

about £1,567 per year

Estimated fuel cost with improvements

about £954 per year

Estimated potential annual income from eligible government schemes

£101 from the Smart Export Guarantee

Current carbon dioxide emissions

5,159 kg of CO₂ each year



Did you know that's equivalent to
taking 3 car(s) off the road for a year?

Potential carbon dioxide saving

1,998 kg of CO₂ each year



Did you know that's equivalent to
flying 7 times to and from Rome?

Quick wins & simple changes

These are cheap to install or free to do, and may even be possible immediately by making relatively small and consistent changes to how you live in your home.

	Estimated cost to make improvement	Potential energy bill saving per year
Try some more efficient ways of drying your clothes	-	£21
Make small changes to how you wash your clothes	-	£6
Try not to leave things on standby and consider stand by plugs	-	£33
Try to fill your dish washer before running it	-	£7
Replace fridges or freezers that are more than 15 years old	£281	£23
Install radiator reflector panels	£17	£17
Turn down your thermostat by one degree	-	£194
Switch off lights when not in the room	-	£15
Estimated totals	<u>£298</u>	<u>£317</u>

Insulation and structure improvements

These are longer term recommendations that may require more significant planning and/or an accredited installer to carry out the work. They are more costly than the quick wins but may still be cost effective over the lifetime of the measure. These measures may also save significantly more carbon dioxide than the quick wins listed.

	Estimated cost to make improvement	Potential energy bill saving per year
Replacement of remaining incandescent lightbulbs with low energy lightbulbs	£22	£19
Loft insulation top-up	£221	£8
Cavity wall insulation	£508	£119
Draught proofed windows	£67	£4
Draught proofed external doors	£37	£2
3.5kW Solar panels (photovoltaic cells)	£4,788	£93
Estimated totals	<u>£5,643</u>	<u>£245</u>

Smart Export Guarantee

Your plan includes a PV array that could generate income from the Smart Export Guarantee (SEG), which is a support mechanism designed for small-scale electricity generators to get paid for the renewable electricity they export to the grid. Terms and conditions apply, to find out more about the eligibility requirements please speak to an installer.

Potential generation income from the Smart Export Guarantee (SEG) scheme

About £101 per year

Heating system upgrade

These recommendations are all about improving your home heating by upgrading to a more efficient or less carbon dioxide producing system or installing better controls to allow you to manage your heating and fuel use better.

The heating system upgrade may consist of several sub-improvements, that when implemented at the same time will have a combined effect on the property.

Selected heating system upgrade:
Mains gas condensing boiler

Consisting of:

Estimated cost to make improvement

Mains gas condensing boiler

£2,039

New hot water cylinder

£482

Estimated total installation cost

£2,521

Potential fuel bill saving of the heating system upgrade
£52 per year

H. Possible EPC Improvement



This section provides you with an estimate of the property's current EPC band and it's potential EPC band after all of the improvements we have recommended. The EPC bands run from A (most efficient) to G (least efficient) based on a numerical score based on 1-100 points under the UK government's scoring system known as the Standard Assessment Procedure (SAP). The lower the SAP rating and EPC banding, the higher the fuel bills will be, and carbon dioxide emissions are likely to be higher too.

Disclaimer

The results given are estimates and may differ from a property's actual Energy Performance Certificate (EPC), if it has one. The results provide an estimate of energy efficiency performance and indicate where improvements may be possible. **We always recommend speaking to an energy assessor or installer before proceeding with any work.**

Energy Efficiency Rating		
	Current	Potential
A		
B		Potential
C		
D		
E	Current	
F		
G		

Estimated current EPC band : E

We estimate that your property is currently in EPC band E. Properties in this band have a below average energy efficiency rating so there is room for improvement to further lower the property's running costs and carbon dioxide emissions. In 2020, around 18% of properties in the UK are in EPC Band E.

Potential band after improvements : B

After carrying out all of our recommendations, we estimate that your property could achieve an EPC band B. This means that your property would be in the second most energy efficient banding. Properties in this band typically have lower running costs and carbon dioxide emissions than the majority of properties in the UK. In 2020, around 9% of properties in the UK are in EPC Band B.

I. How Your Plan Could Help Tackle Climate Change



In this section we look at how the recommendations we've provided in this report will contribute towards the UK having net zero residential emissions, to help mitigate against the climate emergency.

In 2018, UK households produced around 100 million tonnes of carbon dioxide (CO₂e). That's 22% of the UK's total greenhouse gas emissions.³ The UK government is aiming to bring these emissions down to net zero by 2050 through a combination of home improvements, decarbonisation of the electricity grid by installing more low carbon and renewable energy, and carbon offsetting.

Below we've provided some information on how the carbon dioxide emissions of your property, before and after installation of the measures we've recommended to you, compare to the average property in the UK. We've also provided an estimate of the progress towards the UK having net zero residential emissions, if everyone in your EPC band were to carry out the same recommendations as we have given you. This progress is indicative because not every property in your EPC band may be able to carry out the same actions as every home and homeowner are different; but any and all actions, no matter how small, will be contributing towards tackling the climate emergency.

How your plan could contribute

We've estimated that the carbon dioxide emissions of your current property are around **5.16 tonnes per year**. This is higher than the average residential carbon dioxide emissions of 3.51 tonnes per year which means your property may need improvement if you want to contribute more to the progress towards the 2050 net zero emissions target.

If you were to carry out all of the recommendations we have given in this report, we estimate that the carbon dioxide emissions of your property would be around 3.16 tonnes per year. This means that your property would now be contributing more to the 2050 net zero emissions target.

If every property with an EPC band of E were to carry out the same recommendations we have given you, together you would contribute a 10% reduction to the UK's residential carbon dioxide emissions.

³ According to the National Atmospheric Emissions Inventory, in 2018 UK greenhouse gas emissions were around 451 million tonnes of carbon dioxide equivalent (Mt CO₂e).

J. More Information About Improvements



Here we provide a little more information about simple lifestyle changes that you can make as well as more widespread improvements to the property.

Try some more efficient ways of drying your clothes

Tumble dryers are expensive appliances to run, so you should avoid using one whenever possible. If you have a garden or balcony, you can line dry your clothes outside at no cost. You can dry clothes indoors on an airer, however this can cause condensation and lead to damp in some properties. If you're drying clothes indoors you may need to open a window to let moisture escape – close the door to the room to avoid losing heat from the rest of your home. If you do need to use a tumble dryer, it's best to use an energy efficient one. An A+++ model uses 66% less energy than a B-rated model at the moment but keep in mind that the energy labels are changing soon. So next time you are replacing your tumble dryer be sure to check the energy ratings – websites such as <http://www.toptenuk.org> will show you the most efficient models currently on sale and for more information on how the energy label is changing.

Make small changes to how you wash your clothes

Simple changes to your washing habits can provide small energy savings at no cost:
Wash at low temperatures – washing clothes at 30 degrees rather than 40 degrees reduces your machine's energy consumption by almost 60%
Always fill your machine – it's more efficient to do one full load than several small loads.

Try not to leave things on standby and consider stand by plugs

There are lots of devices which continue using power when they're not being used – some you might not have considered before, like games consoles and digi-boxes. Each only uses a small amount of power, but collectively it adds up. To avoid this 'vampire power', you can either turn things off at the wall directly, or use a standby saver to turn off lots of things at once. Take a look around your house and see where there are clusters of devices using energy, such as around your computer or around your TV. These are good places to use a standby saver. Some standby plugs have timers, so you can set them to suit your lifestyle.

Try to fill your dish washer before running it

Always wait until your dishwasher is full before you use it. Two half loads will use more energy (and more water) than one full load, so it's more cost effective you only use your dishwasher when it is full.

Replace fridges or freezers that are more than 15 years old

Old fridges and freezers often develop faults which mean that whilst they appear to be working normally, they use much more energy than they ought to. Usually, fridges and freezers maintain a constant cold temperature by repeatedly cycling on and off. However, old appliances often develop a fault which means they remain in the 'on' mode all the time, therefore using energy constantly. If your fridge is working correctly, you should be able to hear it cycling on and off. Other faults can also develop with older appliances, such as damaged door seals which allow the fridge to leak energy. Old fridges are also likely to be very energy inefficient – new fridges must meet more stringent regulations on energy efficiency, so cost less to run. If you decide to replace your fridge, look for ones with an A+++ energy efficiency rating.

Install radiator reflector panels

Radiator panels are reflective sheets which fit behind your radiator to reflect heat into your room. This reduces the amount of heat from your radiator that gets lost through the walls. They should only be placed behind radiators on external walls. We would only recommend buying radiator panels if you live in a home with uninsulated walls. If you have insulated walls, adding radiator panels will have minimal impact, as your walls are already good at preventing heat from escaping.

Turn down your thermostat by one degree

Turning down your room thermostat can save you lots of money at no cost, without altering your lifestyle at all. You probably won't even notice the change in temperature. Room thermostats should generally be set between 18 and 21 degrees – try turning yours down by one degree for a day and see if you still feel comfortable. If you're still comfortable, try turning it down another degree the next day. Keep testing different temperatures until you find the lowest temperature you are comfortable with. However, if there are any young children or elderly people in your home, don't set the thermostat lower than 18 degrees, as under-heated homes can pose a health risk. Remember, once you've found the optimum temperature for your room thermostat, you don't need to change it with the weather – it will heat your home to the same temperature regardless of the weather outside. Turning up the thermostat won't help the house heat any faster!

Switch off lights when not in the room

Lighting typically makes up around 15% of a household's electricity bill, so it's important to turn off your lights when they're not needed. You should switch off lights whenever you leave a room. Switching lights on and off will save more energy than leaving them on, even if you only leave the room for a few minutes. It's particularly important to remember to turn your lights off if you have halogen bulbs or old incandescent bulbs, as these cost more to run than energy saving light bulbs and LEDs.

Replacement of remaining incandescent lightbulbs with low energy lightbulbs

Fitting low energy lighting is one of the easiest ways to save energy and money in the home. There are two main low energy lighting alternatives:

CFLs (compact fluorescents): A cost-effective option for most general lighting purposes, and now widely available.

LEDs (light emitting diodes): Even more efficient than CFLs, and the ideal replacement for downlighters. They are more expensive than CFLs but save more money in the long term.

Of course, the easiest way to save on your lighting bill is simply to turn off the light when you're not using it. You will ALWAYS save energy if you turn the light out when you leave the room, even if it's only for a minute or two.

Installation simplicity

Installing low energy lightbulbs is one of the simplest energy-saving measures you can do in your home. However – if you have a dimmer switch circuit, there are only some bulbs that are compatible and you may need to work with an electrician to find the right bulb and light fitting for you, see “practicalities below”.



Payback

Low energy lightbulbs pay for themselves very quickly – typically within six months.



Comfort

There is no impact on comfort in your home through installing low energy lighting.



Practicalities

Most energy-saving bulbs aren't fully compatible with dimmer switch circuits at the moment. However a growing range of dimmable CFLs is emerging to address this problem. There are also energy-saving bulbs that can be used with 'staged dimming'. This requires a special sort of dimmer with three separate settings - high, low and off.

Loft insulation top-up

Full loft insulation is an easy and cost effective way of stopping heat escaping from your roof. Loft insulation is easy to install and will last over the lifetime of the property.

If you have some loft insulation but less than 270mm (the recommended amount) then you should top it up.

Installation simplicity

Installation is typically quick and easy. In homes with a pitched roof and a loft, loft insulation can be installed either professionally or you can do it yourself.

Loft insulation involves laying down rolls of mineral wool, known as quilts, between and over ceiling joists and only takes a few hours. If having the work done professionally, all you will need to do beforehand is make sure your loft space is clear.



Payback

If you don't already have any loft insulation the payback is great. It is cheap and easy to install and you only have to do it once.

The payback is longer than for homes that don't have any loft insulation but you will notice increased comfort in your home, you will save some money on your energy bills and reduce your home's carbon footprint.



Comfort

Installing loft insulation will mean that you will be losing less heat through your roof so you will see that your home will heat up quicker and stay warmer for longer. Rooms, especially upstairs rooms, will feel warmer and more comfortable.



Practicalities

Installing loft insulation requires a clear loft. This could be a good opportunity to assess what you've got and get rid of things you don't need. If you require help with clearing your loft, there are clearance service companies that will be able to help you. Once the insulation is installed you will not be able to use your loft for storage, if you are worried about losing precious space it may be possible to board over part of the insulation and use it as storage.

Cavity wall insulation

If you have a cavity wall, then getting it insulated is the quickest and most effective way you can make your home warmer and cheaper to heat. It won't cost much either. Most houses built since the 1920s have cavity walls. Cavity walls mean that there is a gap between the two masonry layers.

Installation simplicity

Insulating a cavity wall is never a DIY job. Cavity wall insulation will take about 2 hours and there is no interference to your everyday life, as all the work is carried out externally. A typical installation requires a series of holes being drilled in the outside of the walls and insulation material is then injected into the cavity between the inner and outer wall. Most standard cavities are filled with either mineral wool, polystyrene beads or foam, which is blown into the cavity.



Payback

The insulation should last over the lifetime of the property and will provide year on year savings on your heating bill. A typical installation of cavity wall insulation will pay for itself within 2 to 3 years.



Comfort

You will find that because you are losing less heat through your walls, your home will heat up quicker and stay warmer for longer after you have turned off your heating, making your home more comfortable.



Practicalities

If you live in a flat and want cavity wall insulation, you will need all leaseholders in the block and the freeholder to agree to the work. Also, some cavity walls are difficult to fill and require installation by specialist companies. This could be if the cavity is less than 50mm wide, if the cavity is already partially filled, if your walls have timber or steel frames or if your building is over three stories high.

If you're unsure whether your home has a cavity wall, you can usually tell from the brick pattern. There's guidance on how to do this at the Energy Saving Trust website

You can usually tell if your home has already had cavity wall insulation if you can see the drill holes through which the insulation was injected. And more modern homes – typically those built from the 1990s - were built with cavity wall insulation so you won't see drill holes but you can assume that the property has insulated walls.

Appearance

Cavity wall insulation will not affect the appearance of your home either externally or internally. The holes drilled into the outside walls are only 18-25mm wide and, once finished the installer will fill the injection holes with mortar that matches the colour of the wall.

You might also consider

You may find that even with insulated walls you are still losing heat through gaps around badly fitted doors, windows and loft hatches. Draught proofing is effective and inexpensive and will have a noticeable difference to the comfort of your home. And fitting A rated double or triple glazing will prevent heat loss through your windows.

Draught proofed windows

Badly fitting doors, windows and loft hatches are all sources of heat loss. Draught proofing is an easy to install measure and the benefits are quickly realised in terms of comfort. It prevents heat loss and draughts by blocking small gaps and spaces around windows with draught-proofing strips, sealants and excluders. Draught-stripping is inexpensive and simple to install and can greatly improve comfort as well as reducing fuel costs.

Installation simplicity

Draught proofing windows that open requires sticking draught-proofing strips around the window frame filling the gap between the window and the frame. Self-adhesive foam strips are cheap, and easy to install, but may not last long. Metal or plastic strips with brushes or wipers attached last longer but are slightly more costly. For windows that don't open, a silicon sealant can also be used.



Payback

Draught proofing windows is a low cost insulation measure, the savings on your fuel bill won't be huge but it will significantly increase the comfort of your home.



Comfort

Draught free homes are comfortable at lower temperatures – so you will be able to turn down your thermostat. It may also help alleviate condensation problems associated with unwanted ventilation.



Practicalities

Draught proofing is a simple DIY task, however older homes with single glazing may need a professional to install if it is to be effective.

Appearance

Draught proofing will have minimal impact on the appearance of your home.

You might also consider

Apart from windows, draughts can come through a number of places in your home. Draughts can come through doors, including keyholes and letter boxes, loft hatches, electrical fittings on walls and ceilings and through holes around pipework leading outside. The work involved is largely the same as it is for windows.

Draught proofed external doors

Badly fitting doors, windows and loft hatches are all sources of heat loss. Draught proofing doors is an easy to install measure and the benefits are quickly realised in terms of comfort. It prevents heat loss and draughts by blocking small gaps and spaces around doors with draught-proofing strips, sealants and excluders. Draught-stripping is inexpensive and simple to install and can greatly improve the comfort of your home as well as reducing fuel costs.

Installation simplicity

Draught proofing doors requires sticking draught-proofing strips around the door, filling the gap between the door and the doorframe. Self-adhesive foam strips are cheap, and easy to install, but may not last long. Metal or plastic strips with brushes or wipers attached last longer but are slightly more costly. Compression seals are particularly well suited for external doors as the initial 3mm of the draught stripping allows for seasonal movement of the door. Items like letterbox excluders can easily be screwed into place on the internal side of the letter box.



Payback

The savings on your fuel bill won't be huge but draught proofing is a low cost insulation measure which is quick and easy to do.



Comfort

Draughts are one of the biggest sources of discomfort in the home. Without draughts, most people feel quite comfortable keeping their home at a lower temperature – so you will be able to turn down your thermostat. It may also help alleviate condensation problems associated with unwanted ventilation.



Practicalities

Draught proofing is a simple DIY task.

After some sealants have been applied around doors, care may be needed when painting to avoid damage to brushes and some types of rubber.

Appearance

Draught proofing your doors will have minimal impact on the appearance of your home.

You might also consider

Fitting a new insulated door and frame will give you more draught proofing and mean you are losing less heat through the door itself. Apart from doors, draughts can come through a number of places in your home. Draughts can come through windows, including keyholes and letter boxes, loft hatches, electrical fittings on walls and ceilings and through holes around pipework leading outside. The work involved is largely the same as it is for doors.

3.5kW Solar panels (photovoltaic cells)

Solar panel electricity systems, also known as solar photovoltaics (PV), capture the sun's energy to generate electricity which can be used to run household appliances and lighting. Solar PV needs light, but not direct sunlight, to work – they can still generate some electricity on a cloudy day. Sunlight is free, so once you've paid for the initial installation your electricity costs will be reduced. If you have a smart export meter, you could also apply for a Smart Export Guarantee tariff, so that you are paid for any electricity that you generate but do not use.

Our recommendations are based on a 3.5KWp (kilowatt peak) solar PV system. Larger and smaller systems are available, both in terms of the size of the system and the amount of energy they generate.

Installation simplicity

Any house with an unshaded roof (or similar space) facing broadly South could potentially install a successful PV system. The stronger the sunshine, the more electricity is produced. Solar PV panels can be mounted on your roof or on the ground. You can also fit solar tiles in place of normal tiles on a roof as an alternative to panels, however these are more expensive and normally only considered where panels are not appropriate due to aesthetic or planning reasons.

Most installations can be completed within one to two days, but some will run into three. A competent installer accredited under the governments Microgeneration Certification Scheme will be able to assess your home and help you choose the best setup to meet your needs. Access is needed to both inside and outside of your property; access is also required to your electricity supply.



Payback

Solar PV is only beneficial as a long-term investment, as you'll only make a profit once the system has paid for itself. With the Smart Export Guarantee, payback time could be between 14 and 20 years for a 3.5kWh system depending where you are within the UK and the Smart Export Guarantee tariff you receive.



Comfort

Installing solar PV will not change the comfort of your home but it will save – and even earn - you money in the medium to long term. And you'll be making a big reduction in the carbon emissions from your home.



Practicalities

Solar PV needs little maintenance – you'll just need to keep the panels relatively clean and make sure trees don't begin to overshadow them. In the UK panels that are tilted at 15° or more have the additional benefit of being cleaned by rainfall to ensure optimal performance. Debris is more likely to accumulate if you have ground mounted panels.

If you live in a conservation area or listed building you may need permission from your local planning office to install this measure

Appearance

Solar PV panels will be visible on your roof unless you use solar tiles (see above) or a ground mounted installation.

You might also consider

Once the installation is complete and certified, you will have to apply for the Smart Export Guarantee with the supplier of your choice. The Smart Export Guarantee ensures that you are paid over £0.00 per kWh, but many tariffs exist at higher rates so we would encourage you to shop around. The supplier you receive the Smart Export Guarantee from does not need to be your current electricity supplier. However, always check the Supplier's terms and conditions.

Mains gas condensing boiler

Boilers account for around 55% of what you spend in a year on energy bills, so an efficient boiler makes a big difference. A condensing boiler is more efficient than an old-fashioned non-condensing one because it recovers more heat and sends cooler gases up the flue. A standard boiler is one that has a separate hot water cylinder (unlike a combi boiler). You might choose a standard boiler if you need to use a lot of hot water.

Installation simplicity

Standard boilers are relatively easy to replace in old-fashioned heating systems without too many pipe-work changes. However, they take up more space than a combi boiler would, due to the separate hot water cylinder.



Payback

The costs for replacing a boiler will vary, but a straightforward gas boiler replacement will typically cost around £2,300. The amount you could save depends on how old and inefficient your existing boiler is. A typical household (gas-heated 3 bed semi) could save around £300 per year by upgrading from a G rated boiler, to an A-rated condensing boiler with a full set of heating controls.



Comfort

Because a standard boiler has a large tank of stored hot water, you can use several taps at once, and these boilers are suitable for larger houses with higher hot water demand. However, the amount of hot water you can use is still limited by the size of your cylinder. For instance you might run a bath, then need to wait for the boiler to heat up the water in the cylinder again before you can run another.



Practicalities

The installer must be Gas Safe registered. Your registered installer will ensure that your system complies with Building Regulations and will make sure you get all the documentation to prove this. Keep these documents safe – you will need them if you sell the property.

Other types of efficient boiler are also available, including a gas combi condensing boiler.

If you need to replace your boiler anyway, it is a very good idea to get the most efficient boiler you can. However, even if your old boiler does not immediately need replacing, this may still be a good option.

Appearance

A standard boiler will take up more space than a combi boiler.

You might also consider

Another option to consider alongside a new boiler is to improve your heating controls. The right controls will let you set your heating and hot water to come on and off when you need them, heat just the areas of your home you want, and decide how warm you want each area to be.

You could also consider buying an efficient hot water cylinder. These come already highly insulated and ready to be installed. Upgrading your hot water cylinder can save you around £45 a year.

Other types of efficient boiler are also available, including a gas combi condensing boiler.

New hot water cylinder

A hot water tank stores hot water so that it is ready to use when you turn your tap on. The hot water can either come from a heating system such as a boiler or it can be heated in the tank with an electrical element like a kettle. You will need to install a hot water tank if you don't already have one but want to take advantage of a hot water system that requires a tank.

Installation simplicity

Installing a hot water tank as part of a new heating system is a job for a professional plumber or heating engineer. Whilst the work is unlikely to take long, the new tank may take up useful storage space in your home.



Payback

Modern hot water tanks are well insulated so hot water will stay hot for longer. Installing a hot water tank as part of a new heating system may provide substantial savings. The cost of installing a hot water tank, including necessary pipework may cost in the region of £500.



Comfort

Getting your hot water from a storage tank means that you can access large volumes of hot water quickly if you want to run a bath.



Practicalities

You will want to locate your tank centrally in your home so that hot water can reach your taps quickly. If your hot water tank is fed by your boiler it is preferable to have your tank close to the boiler to minimise heat lost from pipes that take hot water from your boiler to your tank.

Appearance

You will have to find space for your hot water tank which may mean that storage space is lost or a cupboard built to house the tank.

You might also consider

Installing a new hot water tank will normally take place as part of installing a new heating system. Ensure that hot water pipes between your boiler and tank are fully lagged.



Find a local **TrustMark** registered business that can assist you further.

Visit them at www.trustmark.org.uk

[Click to find out more](#)

K. Other Considerations For Changes



Washing your clothes

Setting your washing machine to wash at 30 degrees Celsius rather than higher temperatures will save around £8 on energy bills and 14kg of carbon dioxide each year. It reduces electricity consumption by 57% compared to washing at higher temperatures.

Always try to fill your washing machine – combining less than full loads and cutting back washing machine use by just 1 cycle per week could save a household £8 a year of energy, and a further £5 a year on metered water bills.



Drying your clothes

Tumble dryers use a lot of energy, but you can save on average £35 a year on your electricity bill and save 55kg of carbon dioxide emissions just by line drying clothes during the summer.

Not everyone has the space to line dry clothes so making sure you have an efficient tumble dryer is important. So when it comes to replacing it make sure you choose the highest rating you can find, at the moment that's an A+++, the lowest you can buy is a B so choose wisely and help reduce your impact on your bills and the environment. Choosing an A+++ tumble dryer over a B-rated one could save you around £450 over its 13 year lifetime.

Other things to consider when buying a tumble dryer is that some have sensors that tell you when your clothes are dry enough, preventing you from wasting energy by over drying your laundry. Electric heat pump tumble dryers are more efficient as they recycle the heat from the ventilation tube back into the dryer after removing the water vapour from the air. There are also gas tumble dryers, but this type of dryer can be slightly more expensive to install, as it needs a gas connection.

Washing the dishes



Dishwashers can take up a significant chunk of your electricity bill, typically costing between £37 and £48 a year to run. Slimline dishwashers typically cost between £23 and £37 a year to run. The most efficient dishwashers on the market have an A+++ rating, and they cost around £7 less to run than the lowest rated dishwashers that you can buy of the same size, and they use less water.

If you don't have a dishwasher then using a bowl to wash up rather than a running tap can save you money on your energy and water bills if you have a

water meter. In fact you only need to run a typical tap for 95 seconds before you would have filled a washing up bowl.

When you replace your appliances

The lowest rated washing machine, dishwasher, fridge, or fridge-freezer available to buy in the shops now is A+. Why not buy the highest rating an A+++, to lower energy bills and carbon dioxide emissions?

When buying a new washing machine, choosing an A+++ unit over an A+ one could save around £45 over its 11-year lifetime, that's 17% less energy; for a dishwasher its around £65 over its 11 year lifetime and for a fridge freezer you could save around £190 and 410kg of carbon dioxide over its lifetime. So its well worth it.

Keep in mind that the energy label for these appliances are changing, and you might find that the appliances you are looking at has two ratings. This is because appliances over the years have become more efficient and are mostly rating very highly. The new energy label has been rescaled for these appliances to make it easier for you to work out which one is more energy efficient. So you might find an appliance rated A++ is now an E for example. The easiest way to work out which label is the new one is by looking for the UK flag at the top of the label.

How you heat your home

A room thermostat switches a home's heating system on and off according to the set temperature. A common misconception is that turning the thermostat up will heat up a home quicker, but this will only heat the home to a higher temperature at the same rate. Insulation increases the speed a home heats up as less heat is being lost through the building.

If you want to save money on your heating bills try turning your central heating thermostat down by 1 degree Celsius, it could save you £60 and 310kg of carbon dioxide every year.



Thermostatic radiator valves

Thermostatic Radiator Valves (TRVs) perform a simple task. They give you control over an individual radiator. If you use them correctly, they will save you money on your heating bills. The numbers on the TRV relate to the room temperature NOT the temperature of the radiator itself. The TRV should detect the temperature of the room and automatically adjust the flow of hot water directly to the radiator. We would recommend setting them at 2 or 3 initially although this is fully dependent on your personal preference.



Top Tip

Leaving the house empty in the winter? If so set your TRVs to * which will allow the radiators to heat the room if the temperature falls too low, protecting you against burst pipes.

Get savvy with smart controls

Smart heating controls are the latest innovation to help you control your heating and understand your energy use. They allow you to control your heating remotely via a mobile app, meaning that you can manage the temperature of your home from wherever you are, at whatever time of day.

A smart meter with in-home display or energy monitor can help householders save energy by increasing awareness of energy use, helping to cut waste. Government estimates that a display or monitor could typically help reduce a household's electricity use by 2.8% and gas use by 2% on average.

Switch it off



There are a lot of devices in our homes now, many of them have standby modes and use energy even when they are left switched on at the wall plug but the device itself is switched off.

This all adds up over a year. By avoiding standby and turning appliances off when you are not using them, especially at the wall socket, it could save £35 and up to 55kg of carbon dioxide every year. It's a common misconception that turn on and off energy saving bulbs use more energy compared to leaving them on. So remember to turn off your lights when you do not need them, as this could save you around £15 on

your annual energy bills and avoid 25kg of carbon dioxide emissions a year.

In the kitchen

Try not to fill the kettle up completely, if you only fill the kettle up with as much water as you need it can save around £6 in energy bills a year. When your cooking on the hob try to use a lid when boiling food, it keeps the heat in reducing the time it takes for the water to boil and it reduces the energy you use.

TVs

Televisions can be the most power-hungry of all entertainment equipment, particularly the largest ones. The larger a television screen, the more energy it will consume, regardless of its energy rating. LED screens are the most common form of flat-screen TV on the market. OLED and QLEDs are similar to LED screens in that they both use an LCD display. The difference with OLED and QLED is that you don't require backlighting. Both types boast very high performance in picture quality; however, currently these do come at a premium.

Power consumption is mostly dependent on level of brightness and hours of use. After selecting the smallest TV still suitable, the best ways to save energy are to reduce brightness settings to your lowest acceptable limit and remember to switch off your TV when not in use. Many TVs incorporate features to do this automatically, such as light sensors to detect the room's brightness and adjust the screen accordingly, and sleep timers to switch off the TV after a number of hours of no interaction.

Home computing

Energy consumption in laptops and tablets have come along way compared to desktop computers. When you are looking for a new computer, by choosing a laptop over a desktop and ensuring your switch it off when not in use you could save up to £19 and 30kg of carbon dioxide a year. Tablets have even lower energy usage; on average, tablets use 70% less power than laptops.

Showers

Taking a bath and showering uses a lot of water in our homes, trying to reduce this will help save water, reduce your water bill and your water heating bills. An easy way to do this is by replacing your shower head with a water efficient one. A typical household could save around £25 off their yearly gas bills and £30 off their metered water and sewerage bills by doing this, that's a total saving of around £55.

Spending one minute less in the shower each day could save £16 off your energy bills each year, in atypical household. With a water meter this could save a further £25 off yearly water and sewerage bills.



Toilets

By fitting a cistern displacement device in an old toilet, could save over 5,000 litres of water a year. That would save around £13 a year in metered sewerage and water bills.

L. What next?



Should you wish to proceed with any of the forementioned improvements, suitably qualified specialists in your area can be found via the Trustmark website below:



Find a local **TrustMark** registered business that can assist you further.
Visit them at www.trustmark.org.uk
[Click to find out more](#)

Find out more about how to save on energy costs in your home. You'll find tips on how to save money on your heating bills, and some useful advice on how to get financial help to make energy saving improvements.

- For general energy efficiency advice visit the [Energy Saving Trust website](#).
- For individual energy efficiency advice, try the [Simple Energy Advice website](#) - 0800 444 202
- In Scotland, [Home Energy Scotland](#) can support you - 0808 808 2282
- In Wales, you can contact [Nest](#) for tailored advice - 0808 808 2244.
- In Northern Ireland, you can use the [Northern Ireland Energy Advice](#) Line - 0800 142 2865

If you want to find out more about the condition of your home, a countrywide home survey can help you. Further information on our range of [Home Surveys can be found on our website](#).

Or you can contact us on 0161 401 2917.

Thank you for choosing

EnergyFact

