

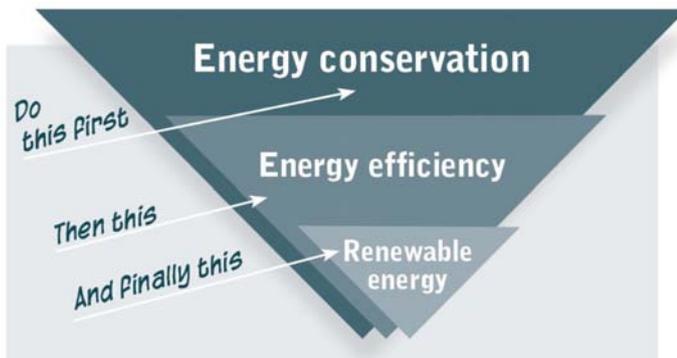


Greening up your home energy

Greener Frieth’s second event, in January 2024, saw villagers come together in the village hall to hear how they might begin to think about transitioning from fossil fuels in their homes.

The speakers were Kirsty Shanahan, CEO of Bucks Community Energy, a not for profit social enterprise; Adam Crisp and Chester Cobb, founders of eco heating company Delta T; and Chris Sadler, founder of Kimbletech, a family run, renewable energy focused electrical contracting business, specialising in solar panels and batteries.

WHERE TO START?



Kirsty began the evening by explaining the importance of maintaining your home well, thereby reducing the risks of energy loss.

Bucks Council currently runs the Energy Doctor scheme, which can help you find ways to conserve energy and is available to households who could get a free visit if:

- The household has an income of £30,000 or less before tax,
- or is in receipt of means tested benefits such as Universal Credit or Council Tax Support,
- or a member of your household is disabled.
- and your home has an Energy Performance Certificate (EPC) rating of D-G or does not legally require one.

See more and request a visit here:

<https://www.buckinghamshire.gov.uk/environment/climate-change-and-sustainability/saving-energy-at-home-and-living-sustainably/request-a-visit-from-an-energy-doctor/>

Thermal imaging

Kirsty explained how this is a great way to investigate where your house leaks heat.

It is only once you have done all you can to make your home energy efficient, that you should go to the expense of retrofitting an alternative energy/heating system.

Advice

If you need advice or help finding installers, these organisations may be able to help:

- Centre for Sustainable Energy www.cse.org.uk
- Energy Saving Trust www.energysavingtrust.org.uk
- National Energy Foundation— Superhomes www.superhomes.org.uk
- Microgeneration Certification Scheme (MCS) www.mcscertified.com
- Trustmark www.trustmark.org.uk
- Cavity Insulation Guarantee Agency (CIGA) www.ciga.co.uk



OPTIONS FOR GREENER HEATING

Air and ground source heat pumps

Adam and Chester from Delta T reiterated the importance of preparing your home, because low carbon heating systems are most efficient in well insulated houses. Homes should have loft and cavity wall insulation. During the Q and A, natural insulating products such as wool were advocated as they are better for health and allow a building to breathe.

Why fit a heat pump?

- Highly efficient, reliable and low-carbon alternative to oil and gas
- £7,500 government grant and zero vat
- Last twice as long as an average boiler
- 100% of our customers say their homes feel warmer and cosier with a heat pump

The next generation of heating!

Grants

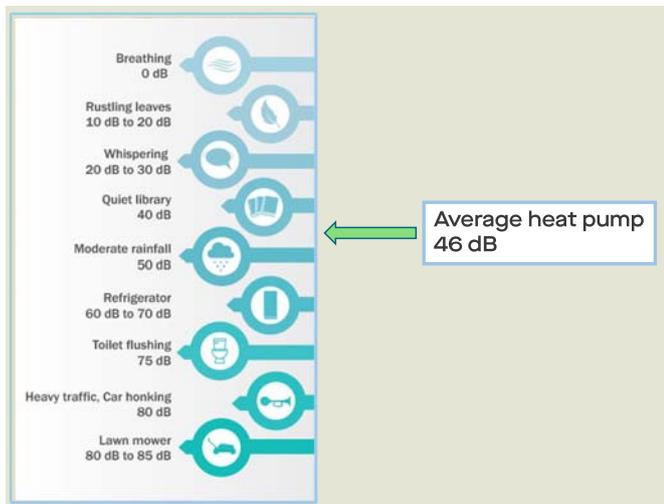
If you are planning to replace a fossil fuel heating system, you may be able to get a grant through the government’s Boiler Upgrade Scheme. Homes must have a valid EPC, with no outstanding recommendations.

Some homes, such as listed buildings, those with solid walls, timber framed buildings and those in conservation areas may be exempt from insulation requirements and still be eligible for a grant and suitable for a heat pump, though planning permission may be required.

As an MCS certified installer, Delta T can help with advice and applications, or find out more here: <https://www.gov.uk/apply-boiler-upgrade-scheme>.

In the past, there have been concerns about noise generated by the pumps, but modern versions have seen improvements on this front. Bear in mind that they will be in use more in the winter months.

If properly planned to suit your home, heat pumps may be up to four times more efficient than a gas or oil boiler.



Delta T can come to your home to make an assessment, calculate the heat loss and design a suitable system for approval.

More info

Find out more about the whys and wherefores of heat pumps from their FAQ web page: <https://www.deltatheating.co.uk/faq>

Solar panels and batteries

Chris Sadler of Kimbletech outlined the basic points to consider before you invest in solar, such as the orientation of your home:

The Basics
Orientation

- South-facing is best all year round.
- You can combine multiple roof spaces to maximise potential.
- North facing roofs contribute in the summer.

Unsure?
If unsure if your available roof space is suitable, check with a professional installer. There's usually always a solution.

Direct sunlight is best, but panels can also work when it is cloudy. They work best in sunny, but cool weather—which means they do work in winter as well. Shading is the enemy. Even a TV aerial will prevent efficient working.

There are various points to consider when designing a system. You should only have the number of panels that you need. If you overload, it will take longer to break even. Battery storage is a good idea if you want an all year round, all weather system and the bigger the battery, the more useful (though cost and returns should always be taken in to account).

Although solar panels require only light maintenance, once installed, you should check for debris and trim any branches that may cause shading.

How Do Batteries Work?

- 01 Monitors home's usage
- 02 Continuously charges & discharges
- 03 Fully automatic
- 04 Charge overnight using cheap electricity rates
- 05 Doesn't power the home in a power cut
- 06 EPS is an upgrade

How does solar work?

The Basics
Kimble SOLAR

Did You Know
Inverters are a required piece of kit for all solar PV systems, otherwise you cannot utilise the energy in your home.

Inverters Are Required

- Solar panels convert irradiance from the sun into DC electricity.
- The DC electricity needs converting.
- AC electricity is used in our homes.

Diagram showing: SOLAR PANELS → INVERTER → BATTERY → HOUSEHOLD APPLIANCES → GRID

Is now a good time to invest in solar?

What's Right For You?
Kimble SOLAR

What's Your Reason For Going Solar?

- Energy Security**
Strategy = Maximise panels
- Reduce Bills**
Strategy = Maximise R.O.I.
- Go Green**
Strategy = Budget spend

One Size Fits All?
No! Solar PV systems should be designed for each customer to ensure the best performance and returns.

Other Considerations

- Electric Vehicle
- Big appliances in the home
- Plans for the future
- Seasonal demand
- Work from home or office

Solar panels can help your energy costs come down. During the Q and A, members of the audience corroborated this by describing the considerable difference in their bills.

The best way to make the most of this saving seemed to be to also invest in battery storage, so that power generated during optimum conditions can be stored for use at a later time. The most efficient (though expensive) batteries also enable you to have energy during power cuts. The good news is that solar batteries will shortly be exempt from VAT (saving 20% on the price to consumers)

You can also shop around for an energy supplier that offers a favourable Smart Export Guarantee (SEG) tariff, whereby you receive payment for your excess solar energy that is fed back to the grid.

One of the key messages was the importance of a reliable supplier, who will design an efficient system for your home:

Choosing An Installer
Do Your Research
Kimble SOLAR

- MCS CERTIFIED
- Which? Trusted Trader
- Trading History
- Aftercare
- Predictions

Planning permission

If your house is a listed building and/or within a conservation area, you will need to apply for planning permission before you can install solar panels. Outside of these categories, a solar installation is likely to be covered by permitted

development rights, but will still need to conform to certain rules. You can find more advice here:

<https://www.homebuilding.co.uk/advice/planning-permission-for-solar-panels>

More info

There is more information about solar energy on the Kimble website: <https://www.kimbletech.com/solar/>

WHAT ALTERNATIVES ARE THERE?

If your home is not suitable for solar panels or a heat pump, particularly if you have a 100% renewable electricity supplier, some of the following may be worth considering:

Electric heating

- Infrared panels
- Heat batteries
- Modern storage heaters
- Air conditioning

Electric hot water

- Smart hot water tanks
- On demand electric hot water
- Electric boilers
- Immersion heaters

And if all else fails:

Smarten everything!

- Smart and responsive heating controls
- More efficient radiators
- Smart ventilation
- Chimney sheep—low tech but effective!



Remember that greener heat technology is still evolving and the big take away is:

Do your prep!

Make your house as energy efficient as it can be for whichever heating system you may choose, and then thoroughly research all the options.



GREENER FRIETH
growing greener together