Environmental sensors and solar panel FAQ's

What are environmental sensors and what do they do?

The environmental sensors that are installed in your home as part of the energy efficiency improvements check the indoor conditions.

They measure:

- Temperature – how warm or cold your home is
- Humidity – how much moisture is in the air
- Carbon dioxide (CO_2) – which helps show if the air in your home is fresh or needs more ventilation

This information helps identify possible problems in the home, such as:

- Condensation
- Damp and mould
- Poor indoor air quality
- Cold rooms
- Too much heat
- Heat loss

Monitoring energy use

If you have a smart meter (or get one in the future), Hafod and the Welsh Government may also look at your energy use.
This helps us see whether improvements like solar panels or other energy upgrades are reducing electricity use. This information helps us to decide which upgrades work best and are worth investing in for other homes.

What happens to your data?

The data collected by the sensors will be sent securely to the Welsh Government.

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Why does the Welsh Government need this information?

Hafod are installing these sensors as part of a programme funded by the Welsh Government to reduce carbon emissions from homes.

This information helps Welsh Government:

- Check if the improvements are working
- Measure reductions in carbon emissions
- Find the most effective ways to make homes more energy efficient

The programme is also used to help improve private housing. By using real data, the government can give better advice about typical costs and the most effective ways to save energy.

How Hafod will use the data

Hafod will also use the information to help make sure homes stay warm, safe and affordable to run.

The data can help us spot and fix problems early, such as:

- Damp and mould
- Heat loss
- Poor air quality
- Homes that are too cold or too hot
- Draughts

This will also help Hafod plan the funding needed to meet:

- The Welsh Housing Quality Standard by 2034
- Their Net Zero carbon target by 2050

Hafod would like to do this with the help of customers by using data from their homes.

Where will they be located in my home?

They will be fitted in your bathroom, kitchen and lounge. A Gateway Hub shall also be located near or close to your fusebox.

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Who are going to be installing them?

A qualified electrician will install the environmental sensors and they take between 30 mins to an hour to fit them.

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What are the benefits of the solar panels?

Solar panels are installed on the roof of your home. They turn sunlight into electricity you can use in your home.

- They work during the daytime whenever there is daylight
- They do not need direct sunlight and still work on cloudy days
- Stronger sunlight = more electricity generated

This electricity can help reduce the amount you buy from your energy supplier.

What else will be installed?

Inverter
- Installed in your loft
- Converts energy from the solar panels into electricity your home can use

Bird protection mesh
- Fitted around the panels
- Stops birds nesting underneath

Why are solar panels good for your home?

Free electricity

Solar panels produce electricity you can use during the day at no cost.
To make the most of this, try using larger appliances during the daytime, for example:

- Washing machines
- Dishwashers
- Tumble dryers

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They can help save you money

The electricity from the panels will be used in your home first. This means you may buy less electricity from your energy supplier, which could lower your bills.

We will let you know the maximum amount of electricity your panels can produce on a sunny day, so you know what to expect.

Please note:

- Energy prices can change
- Electricity use varies from home to home
- Hafod cannot control energy prices

Renewable energy

Solar panels produce renewable, low-carbon electricity.
This means the energy comes from a natural source and does not create harmful greenhouse gases.

Can I still have solar panels if I live in a flat?

Yes. You can still have solar panels if you live in a flat.
The solar panels are installed on the roof of the building and will be connected to each individual flat. This means each flat can use the electricity generated by the panels during the day.

If several flats share one roof:

- Electricity generated by the panels is divided fairly among the flats
- All residents benefit from renewable electricity
- Helps reduce energy bills and make the building more energy efficient

Solar panels help produce renewable energy, lower carbon emissions, and support Hafod's goal of more sustainable and affordable homes.

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Will solar panels damage my roof?

No. Before installation, contractors will check that:

- Your roof is in good condition
- Tiles are secure
- Everything is watertight

Panels will only be installed if the roof is suitable.

Will this cost me anything?

- Solar panels: No cost to you
- Environmental sensors: Free to use

The small gateway hub uses a tiny amount of electricity, about £4 per year on average. If energy efficiency improvements are installed, the savings should cover this cost easily.

How long will installation take?

The whole process usually takes 6–8 weeks from the first appointment to completion.
This may vary depending on the work required.
Our contractors follow Hafod's code of conduct and will always aim to leave your home clean and tidy.

Who can I speak to if I have more questions?

There are plenty of options to get in touch with us.

You can call our Customer Experience team on 0800 024 8968

Email our Decarbonisation Engagement Officer Justine:
Justine.Williams@hafod.org.uk
Email our Assets Management team: Asset.Management@hafod.org.uk
Or visit our website www.hafod.org.uk for more information.