



## What is decarbonisation and why is it important?

**Decarbonisation** is the reduction in carbon dioxide emissions from a building, or energy production process. Decarbonisation of your building and the way it is heated is the most effective way of reducing your buildings carbon emissions. This is likely to involve replacing a gas, oil or combi boiler with, for example a heat pump. Other options could include solar panels, a biomass boiler or a small window turbine.

The best time to upgrade the heating of your building to a **low carbon** source is when you existing system has come to the end of its life. However, it might be appropriate to replace it sooner than this, if it is part of a bigger project or **whole house retrofit** which is taking a **holistic** approach to improve the fabric of the building, its energy efficiency and carbon emissions.

If your building is listed, or a building in a conservation area, then you may need listed building consent or planning permission to install low carbon technologies. Please visit the [Permissions](#) page for guidance on whether permission may need to be sought from the Council. If your building is listed, then it is advised that you seek [pre-application advice](#) from the Council on installing low carbon technologies as it will be necessary to ensure that they do not detrimentally impact the buildings special architectural or historic interest because this is protected in law.

### Other considerations

When considering upgrades to your heating system and decarbonisation of your traditional building, it is important that you considered the following:

- 1) Is there any maintenance or repairs I need to do first? If your building is in poor repair or has issues with damp, then this may reduce or worse, stop the measure you are looking to implement from working.
- 2) What is your end goal? Do you want to improve the comfort levels of your building, its **EPC rating**, or perhaps you want to achieve a **net zero** or **passivehaus** standard home?
- 3) Is your property a listed building or in a conservation area?
- 4) What are your buildings constraints? For example its form, layout, constructional materials or location.

If your building is a listed building, or located in a conservation area, it will be important to consider how the works might affect the significance of the heritage asset. If you are unsure about this, then you should seek professional advice and/or use the Councils [pre-application advice service](#). For details about where to find a suitable professional, please visit the [Choosing a Professional](#) page.

## Further information

The Essex Design Guide provides a helpful table on [Renewables and Low Carbon Options for Traditional Buildings](#). This includes considerations and risks to the building associated with the installation of renewable and low carbon solutions.

Historic England has a detailed webpage on [Low and Zero Carbon Technologies](#) and has recently produced a guidance note on [Adapting Historic Buildings for Energy and Carbon Efficiency](#).