

# The Planning Series

## 9 – Small-scale renewable energy schemes

June 2022



The Welsh Parliament is the democratically elected body that represents the interests of Wales and its people. Commonly known as the Senedd, it makes laws for Wales, agrees Welsh taxes and holds the Welsh Government to account.

An electronic copy of this document can be found on the Senedd's website:  
[research.senedd.wales](https://research.senedd.wales)

Copies of this document can also be obtained in accessible formats including Braille, large print, audio or hard copy from:

**Welsh Parliament**  
**Tŷ Hywel**  
**Cardiff Bay**  
**CF99 1SN**

Tel: **0300 1100 187**

Email: **[Rhiannon.Hardiman@senedd.wales](mailto:Rhiannon.Hardiman@senedd.wales)**

Twitter: **[@SeneddResearch](https://twitter.com/SeneddResearch)**

Senedd Research: **[research.senedd.wales](https://research.senedd.wales)**

Subscription: **[Real time updates](#) | [Weekly and monthly updates](#)**

© **Senedd Commission Copyright 2022**

The text of this document may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not used in a misleading or derogatory context. The material must be acknowledged as copyright of the Senedd Commission and the title of the document specified.

# **The Planning Series**

## 9 – Small-scale renewable energy schemes

June 2022

---

**Author:**

Rhiannon Hardiman



## Contents

<b>What are small-scale renewable energy schemes? .....</b>	<b>1</b>
<b>How is this type of development controlled?.....</b>	<b>1</b>
<b>What kind of equipment is permitted development?.....</b>	<b>1</b>
Domestic premises.....	2
Non-domestic premises .....	3
<b>When is a planning application required? .....</b>	<b>4</b>
<b>Further information .....</b>	<b>4</b>



## What are small-scale renewable energy schemes?

Small-scale renewable energy schemes typically include the installation of solar panels and wind turbines at domestic and non-domestic premises. Other examples of small-scale renewable energy technologies include ground and air source heat pumps, biomass systems and combined heat and power (CHP) systems.

## How is this type of development controlled?

The Welsh Government's national planning policy for energy is outlined in [Planning Policy Wales, Edition 11](#) and [Future Wales: the National Plan 2040](#). Planning Policy Wales states that the Welsh Government's highest priority is to reduce demand for energy wherever possible and affordable and that low carbon electricity must become the main source of energy in Wales. Future Wales supports a low carbon economy and the growth of sustainable and renewable energy.

The installation of any kind of energy equipment outdoors is considered to be development. Some of this equipment is 'permitted development' and, subject to certain limitations and conditions, does not require the submission of a planning application. Any installation of equipment not conforming to the limitations and conditions specified in the [Town and Country Planning \(General Permitted Development\) Order 1995 \(GPDO\)](#), and any other type of renewable energy not referred to in the GPDO will require a planning application to be submitted to the Local Planning Authority.

## What kind of equipment is permitted development?

Permitted development rights for small scale renewable energy developments at domestic and non-domestic properties are set out in Schedule 2 of the GPDO as amended under Part 40 Installation of domestic microgeneration equipment, and Part 43 Installation of non-domestic energy generation equipment.

For the purposes of current permitted development rights, for all small scale renewable energy technology on domestic properties and most renewable energy technology on non-domestic properties (except solar panels) development is

described as microgeneration which is defined under Part 2 of the **Energy Act 2004** as:

- technologies that generate **electricity** - 50 kilowatt (kW) capacity, including solar photovoltaic (PV) panels, solar panels and micro-CHP; and
- technologies that generate **heat** (thermal) - 45 kW capacity, including heat pumps, biomass and solar thermal.

## **Domestic premises**

The types of energy equipment for **domestic premises** (either a house, block of flats or an outbuilding) that are 'permitted' subject to limitations set out in the GPDO are:

- **Solar panels on roofs or walls** of a house, flat or outbuilding:
  - **On a wall or pitched roof** - up to 200mm in depth; the panels must not extend higher than highest part of the roof;
  - **On a flat roof** - more than one metre from the roof edge; does not protrude more than one metre above the plane of the roof;
- **Single stand-alone solar panel** array within the boundary of a house or flat - no more than one standalone solar array; must not exceed four metres in height (or two metres in height if within five metres of the site boundary); and the solar array does not exceed 9 square metres in area;
- **Single ground or water source heat pump** - anywhere within the boundary of a house;
- **Single air source heat pump** - it must comply with Microgeneration Certification Scheme (**MCS Standards**) or equivalent; no standalone wind turbine can be already installed; the compressor unit can't exceed one cubic metre; it can't be within three metres of a boundary; not on a pitched roof or within one metre of a flat roof edge; it can't be on a roof or wall facing a highway and must be used solely for heating purposes;
- **Single flue** - for a biomass heating system (up to one metre above the height of the roof);
- **Single stand-alone wind turbine** - no air source heat pump can be already installed; the turbine blades must be non-reflective, the blades must be greater than five metres from ground level and swept area does not exceed 9.6 square metres; overall height does not exceed 11.1 metres; the turbine should

not be closer to the boundary than 110% of wind turbine height; it can't be on 'safeguarded' land (for aviation or defence purposes); and

- **Temporary (up to 12 months) single anemometry mast** (a mast installed for the purpose of measuring wind speeds and directions) – no wind turbine or air source heat pump can be already installed; the mast must be less than 11.1 metres; not closer to the boundary than 110% of the mast height; an anemometry mast has not been installed at the same location within the preceding five years.

In the case of solar panels (including stand-alone solar), air source heat pumps and wind turbines, permitted development is conditional on minimising the effect on the amenity of the area and the visual impact on the house, flat or outbuilding and the equipment must be removed if no longer needed.

Permitted development rights place a limit on the generating capacity (and therefore size) of a domestic solar panel system (as defined by the term microgeneration), although the amount of energy produced will vary depending on the amount of sunlight, panel orientation and panel efficiency.. Planning permission is not required for biomass and CHP systems housed inside a building.

There may be other areas where the exercise of permitted development rights could have a serious impact. A Local Planning Authority can serve an Article 4 direction to withdraw permitted development rights in a particular area, if it considers this to be necessary. Such a direction has to be approved by the Welsh Government.

## Non-domestic premises

Part 43 of Schedule 2, Installation of non-domestic energy generation equipment , allows for solar panels, stand-alone solar panel arrays, ground source heat pumps, water source heat pumps, flues forming part of biomass heating systems and flues forming part of combined heat and power systems. The guidelines for these developments are similar, although not identical, to those for domestic premises. A **2019 Amendment Order** amended Part 43 to extend permitted development rights for non-domestic solar installations in Wales. Importantly, in respect of this:

- **Solar panels on roofs or walls** of commercial buildings do not fall under the limitations of microgeneration as defined in the Energy Act 2004. As a consequence, there is no restriction on the generating capacity and therefore number of solar panels that can be installed on a non-domestic building subject to certain limitations such as position/design, and proximity to an airport

or aerodrome, and conditional requirements such as siting to minimise any impacts from glint or glare.

Permitted development rights apply to buildings on agricultural or forestry land to house microgeneration equipment, and in particular to house hydro-turbines, biomass boilers and anaerobic digestion systems. The buildings can also be used to store associated fuel and waste, as long as the fuel or waste is produced on the agricultural or forestry land or by the boiler or system.

## When is a planning application required?

The installation of some of the energy technologies mentioned above is not considered to be ‘permitted development’ in **Conservation Areas, World Heritage Sites, Areas of Outstanding Natural Beauty or Sites of Special Scientific Interest** or if they affect a **Listed Building**. In certain cases a planning application would therefore still be required. **Flats** are only covered by these permitted development rights where they exist in a building consisting solely of flats. If the flat is over a shop then the permitted development rights do not apply.

While wind turbines require planning permission on non-domestic premises, a single stand-alone turbine can be installed at domestic premises. Wall or roof mounted wind turbines also require planning permission.

Air source heat pumps are permitted development on domestic premises (subject to limitations) but planning permission is required to install one on non-domestic premises. On domestic properties the requirement for an air source heat pump not to be located within 3m of a property’s boundary if it is to be permitted development is to help mitigate potential noise concerns which may impact the amenity of neighbouring properties.

## Further information

### Welsh Government

The [planning section](#) of the Welsh Government website provides information including:

- [Planning Policy Wales](#) (Edition 11) Welsh Government’s national planning policy.
- [Future Wales: the national plan 2040](#) Welsh Government’s National



Development Framework, setting the direction for development in Wales to 2040.

- **[Planning: a guide for householders](#)** Version 3 (2020 update)
- Generating your own energy **[Planning Regulations for Microgeneration](#)** (2012)
- **[Permitted development rights and non-domestic solar photovoltaic and thermal panels](#)** A 2016 review of planning rules applicable to non-domestic solar panels and options for amending these rules.
- **[The Town and Country Planning \(General Permitted Development\) \(Amendment\) \(Wales\) Order 2012](#)**
- **[The Town and Country Planning \(General Permitted Development\) \(Amendment\) \(Wales\) \(No.2\) Order 2012](#)**
- **[The Town and Country Planning \(General Permitted Development\) \(Amendment\) \(Wales\) Order 2019](#)**

## Planning Aid Wales

**[Planning Aid Wales](#)** is a charitable organisation helping **eligible** individuals and communities to participate more effectively in the planning system. It provides advisory services, including a helpline.

## Senedd Research

Other planning briefings produced by Senedd Research are available on the **[Senedd Research website](#)**.

You can also follow us on Twitter: **[@SeneddResearch](#)**