

P-06-1503 Site ground mounted solar panels next to roads and railways, in industrial areas and over car parks

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Introduction

Petition Number: P-06-1503

Petition title: Site ground mounted solar panels next to roads and railways, in industrial areas and over car parks

Text of petition: Acting on climate change means we need to reduce our energy use and move to using more renewable energy. Solar power is part of the solution.

Germany have taken a different approach to Wales and the UK however and commissioned studies to look at siting ground mounted solar panels next to roads and railways, in industrial areas and even over car parks. These studies have identified enough suitable land to install more than enough solar to meet Germany's 2030 target of 215GW.



Meanwhile, in an effort to increase solar power capacity and to support the solar manufacturing industry in Europe, the EU are progressing a 'solar roof top initiative' which will see new regulations making it mandatory to install solar panels on any new public, commercial and residential buildings by 2029.

Welsh Government however prefer not to bring in new regulations which would see all new builds in Wales having solar panels. They are also in favour of siting ground mounted solar panels on agricultural land.

We call on Welsh Government to commission a new study to analyse the options for ground mounted solar panels alongside roads, railways, in industrial areas and over car parks to see if we can achieve our solar power targets by using these areas.

<https://cleantechnica.com/2024/07/02/german-industry-embraces-rooftop-solar/>

<https://www.borntoengineer.com/solar-panels-a-requirement-on-all-new-eu-buildings>

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1. Background

1.1. The current state of solar PV in Wales

Solar photovoltaic (PV) contributed approximately 5.1% of total electricity generation in Wales in 2023. The Welsh Government's [Energy in Wales report 2023](#) said that a total of 86,398 solar PV projects provided 1,291 MW of capacity and an estimated 1,184 MWh of electricity generation. This makes solar PV the largest renewable technology in Wales by capacity, and the third largest by generation, behind only onshore (3,106 MWh) and offshore wind (2,163 MWh).

There has also been a large increase in the deployment of solar PV projects in Wales in recent years. Almost four times as many projects were commissioned in 2023 (15,300) compared to 2021 (3,900). The new solar PV capacity installed in 2023 (108 MW) was more than double the amount installed in 2022.

1.2. Planning guidance and project consenting

Some types of development are considered by planning law to be 'permitted' and are therefore granted development consent without the need for a planning application. Small installations of solar panels, either on roofs, walls, or ground-mounted panels, may be considered 'permitted development' under [Welsh Government planning guidance](#).

Larger solar projects require planning consent and are subject to approval by the relevant planning authority, which is determined based on proposed generating capacity, as shown in the table below.

Project capacity	Consenting organisation
<10 MW	Local planning authority (LPA)
10 - 350 MW	Welsh Ministers (Developments of National Significance (DNS))
>350 MW	UK Secretary of State (Nationally Significant Infrastructure Projects)

However, following the [Infrastructure \(Wales\) Act 2024](#) gaining Royal Assent, a new consenting regime known as an Infrastructure Consent for 'Significant Infrastructure Projects' is being established to replace the existing DNS regime.

The Act changes the threshold in relation to energy generation and means energy generation projects of between 10-49 MW, currently consented by the Welsh Ministers through the DNS regime, will in future be consented by LPAs.

In November 2024, the Welsh Government announced it was delegating decisions for energy projects under 50 MW to [Planning and Environment Decisions Wales \(PEDW\)](#).

In June 2025 the Welsh Government laid a number of Regulations to implement the new regime, including [The Infrastructure \(Wales\) Act 2024 \(Commencement No. 1\) Order 2025](#). As a result of this Order, decisions on energy generation projects under 50MW will be consented by LPAs from 15 December 2025.

1.3. Measures in Europe

The petition links to two articles discussing the expansion of rooftop solar in Germany and the European Union's '[European Solar Rooftops Initiative](#)'. The latter measure will make it mandatory to install solar panels on all new residential buildings by 2029, and on all new and existing large public and commercial buildings by 2027.

The petition also mentions [research by the German Institute for Applied Ecology](#) published in 2024 (a short [English language summary](#) is available on Clean Energy Wire). The research found that 287GW of solar capacity could be installed along Germany's roads, railways, above car parks, and in industrial and commercial areas. This would exceed Germany's 2040 target for 200GW of ground-mounted solar systems, and reduce the need to site solar panels on other areas of land. Germany's Renewable Energy Act currently calls for an equal split between rooftop solar and ground-mounted solar.

The previous [German Government's 2023 Solar Strategy](#) sets out its approach to solar deployment. [Solar Package I, \(English language summary\)](#) which commenced in 2024, included explicit permission for solar PV installations in commercial and industrial areas.

1.4. UK Government proposals

In May 2025, the UK Government launched a [call for evidence](#) on "the potential for solar canopy installation on new outdoor car parks". Section 1 asks for feedback on a proposal for mandatory solar canopies on new outdoor car parks and opportunities for deployment on existing car parks. The territorial extent of Section 1 includes Wales, although the UK Government acknowledges that some related policy areas are devolved to national administrations.

In her response to the petition, the Cabinet Secretary for Economy, Energy and Planning, Rebecca Evans MS, says that her officials are working with UK Government counterparts on these proposals.

2. Welsh Government action

The Cabinet Secretary's petition response says the Welsh Government has no plans to install solar panels on the Core Valley Lines, which are the only devolved railway infrastructure in Wales. She says Trunk Road Agents, who manage major roads in Wales, are working with Welsh Government officials to identify opportunities to use renewable energy sources .

The Cabinet Secretary further says that Welsh Government changes to Building Regulations on fuel and power in 2022 have encouraged the use of renewable energy generation on new housing, although these are not mandatory. The new notional building specifications, which set energy targets for housing, include solar PV.

The Welsh Government has statutory duties to reduce greenhouse gas emissions under the *Environment (Wales) Act 2016*. The Welsh Government has also set a target for renewable electricity generation to be equivalent to 70% of Wales' annual electricity consumption by 2030, rising to 100% by 2035.

The Welsh Government's national planning policy is set out in Future Wales: The National Plan 2040 and Planning Policy Wales (PPW). Section 5.7 of PPW states:

The planning system should secure an appropriate mix of energy provision, which maximises benefits to our economy and communities whilst minimising potential environmental and social impacts.

PPW also sets out guidance for the management of the best and most versatile agricultural land:

Land in grades 1, 2 and 3a should only be developed if there is an overriding need for the development, and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations.

In 2019, the consultancy [Arup published Welsh Government-commissioned research](#) “informing the identification of priority areas for solar and wind energy in Future Wales”. The research supported the Welsh Government to locate “the most appropriate locations for large on-shore wind and solar energy development in Wales”. It recommended 15 priority areas for solar and wind energy “based on key areas of analysis, featuring environmental designations, heritage designations, high-level landscape assessment, and aviation constraints”.

3. Welsh Parliament action

On 11 June 2025, there was a [Senedd debate on a Welsh Conservatives motion](#) calling on the Welsh Government to: announce a moratorium on applications for solar panels on agricultural land; review solar energy potential in Wales; and develop a solar strategy for Wales. Janet Finch-Saunders MS, who moved the motion, cited the same German Institute for Applied Ecology study as is referenced in this petition to discuss the potential installation of solar panels along transport infrastructure, over car parks, and in industrial and commercial areas. The motion was not passed.

Samuel Kurtz MS [asked the Cabinet Secretary](#) about the Welsh Government’s consideration of installing solar panels between railway tracks in a written question on 8 May 2025. The Cabinet Secretary said there were no plans to install panels on the Core Valley Lines, but that the Welsh Government supports research into “innovative solutions so that buildings and infrastructure can become active energy generating units”.

An [open debate on 19 March 2025](#) addressed the question of whether renewables alone can meet Wales’ energy needs. The debate included discussion of the most appropriate locations to site solar panels.

In January 2023, Sioned Williams MS [highlighted policy developments](#) in France requiring every large car park to include a canopy of solar panels. She asked the then-Minister for Climate Change, Julie James MS, whether she would look into the feasibility of developing a similar scheme for Wales. Julie James MS responded:

I'm not sure that we could justify building a canopy in order to put a solar panel on it. But I absolutely take the point that, where there is capacity to put a solar panel on an existing roof, or we're building new, deliberately, we should be doing that.

Every effort is made to ensure that the information contained in this briefing is correct at the time of publication. Readers should be aware that these briefings are not necessarily updated or otherwise amended to reflect subsequent changes.