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Planning and solar farms

1	**Background: Solar farms and net zero**	**4**
1.1	UK Government target: Net zero by 2050	4
	A "fully decarbonised" power system by 2035	4
	A fivefold increase in solar power by 2035	5
1.2	Targets set by the devolved administrations	5
2	**Planning policy and proposed reforms**	**7**
2.1	Small-scale solar farms (below 50MW)	8
2.2	Large-scale solar farms (above 50MW)	9
	National Policy Statements (NPSs)	9
2.3	Siting of solar farms	10
	Siting on agricultural land	11
	Siting of solar farms on Green Belt land	12
2.4	Devolved administrations	12
	Wales	12
	Scotland	14
	Northern Ireland	15

3	**Proposed reforms to planning policy**	**17**
3.1	Small-scale solar farms: Update of the NPPF	17
3.2	Large-scale solar farms	18
	Fast-track consent route for NSIPs	18
	Revised NPSs for energy and renewable infrastructure	19
4	**Stakeholder views and commentary**	**21**
4.1	Siting of solar farms on agricultural land	21
	Multi-functional land use: 'agri-voltaics'	22
	How much farmland is used for solar farms?	23
4.2	Committee reports	25
4.3	Skidmore review	26
5	**Further reading and parliamentary material**	**28**
5.1	Further reading	28
5.2	Parliamentary questions	29

Summary

The UK Government set a legally binding target to reduce its greenhouse gas emissions by 100% target by 2050, compared to 1990 levels. This is known as the 'net zero target'. To meet this target, the government has set the aim of "a fully decarbonised, reliable and low-cost power system by 2035".

A fully decarbonised power system would be "composed predominantly of wind and solar" it said. The government intends to achieve a fivefold increase in solar power by 2035 (from a capacity of 14GW to 70GW).

Installing solar farms usually requires planning permission. Depending on their size, solar farms will either require planning permission from the local planning authority (LPA) or from the Secretary of State for Department for Energy Security and Net Zero (DESNZ):

- Solar farms with a generating capacity below 50 megawatts (MW) fall under the remit of the LPA and require planning permission.
- Solar farms with a generating capacity above 50 megawatts (MW) are considered 'nationally significant infrastructure projects' (NSIPs) and require development consent from the Secretary of State for DESNZ.

LPAs will decide planning applications, including for solar farms, in line with their local plan and the government's National Planning Policy Framework

(NPPF). In general, the NPPF guides development away from the "best and most versatile" (BMV) agricultural land (excellent to good quality land of grades 1, 2, and 3a). If the use of agricultural land is necessary, the NPPF advises LPAs to use poorer- over higher-quality land.

For NSIPs, the Planning Inspectorate will carry out an examination of the project. The Secretary of State for DESNZ will then decide applications in line with policies set out in National Policy Statements (NPSs).

The NPS EN-3 for renewable energy infrastructure (PDF) currently in force does not include policies for solar farms. The government consulted on its proposed updates to the energy NPSs in 2021 and on further revisions in 2023.

The draft updated NPS EN-3 for renewable energy infrastructure (PDF) would advise that, although land type should not be the predominating factor in determining site location, solar farms should be sited on previously developed and non-agricultural land "where possible". It notes, however, that solar farms on agricultural land, including on BMV land, are not prohibited.

Some organisations have raised concerns about the siting of solar farms on farmland. For example, CPRE said it was "essential" to preserve agricultural land for farming purposes and food production.

Renewable energy groups, such as Solar Energy UK, have argued that, even under a fivefold increase in solar power, solar farms would have "minimal if any impact" on food security.

The Solar Power Portal also pointed to multi-functional 'agri-voltaics' land uses to highlight that solar power and farming are not necessarily mutually exclusive, for example, sheep could be grazed on solar farms. CPRE has said agri-voltaics did not compensate for the "lost potential of the land" (PDF).

1 Background: Solar farms and net zero

Solar farms (also known as solar parks or power stations) are installations of multiple solar photovoltaic (PV) panels. They are used to generate energy at a large scale to feed into the electricity grid and to supply power to domestic and commercial consumers. They differ from small-scale solar panels, which are used by homeowners, businesses or community groups to supply power directly for their consumption.[1]

Solar farms are usually ground-mounted, meaning that they are sited on land rather than rooftops. Unlike the rooftop panels, ground-mounted solar panels can be placed away from shade and moved so they are at the optimum angle to harvest solar rays throughout the day and throughout the seasons.[2]

1.1 UK Government target: Net zero by 2050

In the Climate Change Act 2008, the UK Government set a legally binding target to reduce its greenhouse gas (GHG) emissions by 80% by 2050, compared to 1990 levels. In June 2019, the government raised the 80% target to a 100% target by 2050.[3] This is known as the 'net zero target'.

A "fully decarbonised" power system by 2035

In its Energy White Paper (December 2020), the government set the aim of "a fully decarbonised, reliable and low-cost power system by 2035". It noted that "a low-cost, net-zero consistent electricity system is most likely to be composed predominantly of wind and solar", although these "intermittent renewables" would need to complemented with technologies such as nuclear, gas with carbon capture usage and storage and batteries.[4]

The government's proposals for meeting its net zero by 2050 target are set out in the Net Zero Strategy (October 2021).[5] In the Strategy, the government reiterated its commitment to "fully decarbonise our power system by 2035, subject to security of supply".[6]

1 National Grid, How does solar power work? | Solar energy explained, last updated May 2023
2 Renewable Energy Hub, Ground Mounted Solar Panel Systems, April 2023; Renewable Energy Hub, Everything You Need to Know About Solar Farm Requirements, April 2023
3 Climate Change Act 2008, as amended by the Climate Change Act 2008 (2050 Target Amendment) Order 2019
4 DESNZ and BEIS, Energy white paper: Powering our net zero future, December 2020
5 DESNZ and BEIS, Net Zero Strategy: Build Back Greener, last updated April 2022. It builds on the government's ten-point plan for a green industrial revolution (November 2020).
6 DESNZ and BEIS, Net Zero Strategy: Build Back Greener, last updated April 2022, chapter 3, para 11

A fivefold increase in solar power by 2035

The British Energy Security Strategy (April 2022) provided further detail on the government's proposals for reducing its reliance on imported fossil fuels and accelerating its deployment of domestic sources of energy. One of its aims set out in the Strategy was to "ramp up" the deployment of both rooftop and ground-mounted solar systems. The government said it intended to achieve a fivefold increase in solar power by 2035 (from a capacity of 14GW to 70GW).[7]

In March 2023, the government published Powering Up Britain, a plan setting out further detail on transitioning away from reliance on fossil fuels to "cheaper, cleaner, domestic source of energy".[8]

In Powering Up Britain, the government restated commitments set out in its previous strategies to "fully decarbonise the power system by 2035, subject to security of supply" and to achieve a fivefold increase in the deployment of rooftop and ground-mounted solar power by 2035. It said it would seek:

- the widespread deployment of rooftop solar on commercial and industrial properties.
- the large-scale deployment of ground-mounted solar on brownfield, industrial, and low- and medium-grade agricultural land.[9]

In line with recommendations made by Chris Skidmore MP in the Independent review of net zero (January 2023), the government also said it would set up a government-industry solar taskforce in 2023 to achieve 70GW of solar power by 2035. It also said it would publish a roadmap in 2024, setting out step-by-step plans for furthering the deployment of solar power.[10]

1.2 Targets set by the devolved administrations

The devolved administrations have also set targets to reduce their greenhouse gas emissions to net zero compared to 1990 levels:

- The Welsh Government declared a climate emergency in 2019. In March 2021, the Welsh Parliament/Senedd Cymru passed a net zero target for 2050. The Welsh Government has also set interim targets for 2030 (63% reduction) and 2040 (89% reduction).[11]
- With the Climate Change (Scotland) Act 2009, as amended in 2019, the Scottish Government set the target to reduce Scotland's GHG emission to

7 DESNZ and BEIS, Policy paper: British energy security strategy, last updated April 2022
8 DESNZ, Powering up Britain, April 2023
9 DESNZ, Powering up Britain: Powering Up Britain: Energy Security Plan, April 2023
10 DESNZ and BEIS, Independent Review of Net Zero (Skidmore Review), January 2023
11 Welsh Government, Climate change targets and carbon budgets, last updated November 202

net zero by 2045 at the latest. It also set interim targets for reductions of 75% by 2030 and 90% by 2040.[12]

- In 2022, the Northern Ireland Executive passed the Climate Change Act (Northern Ireland) 2022, setting the target for Northern Ireland to reduce its emissions to net zero by 2050. It has also set an interim target of a 48% reduction in GHG emissions against the 1990 baseline by 2030.[13]

[12] Climate Change (Scotland) Act 2009, as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019; Scottish Government, Reducing greenhouse gas emissions, undated

[13] Climate Change Act (Northern Ireland) 2022; Department of Agriculture, Environment and Rural Affairs (DAERA), The Climate Change Act (Northern Ireland) 2022 - Key elements, March 2022

2 Planning policy and proposed reforms

Installing solar farms usually requires planning permission. Depending on their size, solar farms will either require planning permission from the local planning authority (LPA) or from the Secretary of State for Department for Energy Security and Net Zero (DESNZ):

- Solar farms with a generating capacity **below 50 megawatts** (MW) fall under the remit of the LPA and require planning permission.
- Solar farms with a generating capacity **above 50 megawatts** (MW) are considered 'nationally significant infrastructure projects' (NSIPs) and require development consent from the Secretary of State for DESNZ.[14]

The size of a 50MW solar farm will vary depending on the proposed site and the associated infrastructure. The government estimates that a typical 50MW solar farm will include around 100,000 to 150,000 panels and cover between 125 and 200 acres. As solar technology becomes more efficient, the size of a solar farm capable of generating 50MW will likely decrease.[15]

1 Permitted development rights for solar panels

Installing of small-scale 'microgeneration' solar panels for use directly for personal consumption is often permitted development. Planning permission is not usually required to install solar panels up to 50kw on domestic roofs and up to 1MW on commercial roofs, provided that the panels are not of unusual design and the building is not listed or in a designated area.[16]

Between February and April 2023, the government consulted on expanding permitted development rights for commercial rooftop solar installations. It proposed removing the current threshold of 1MW.[17] It also proposed a new permitted development right for solar canopies on non-domestic carparks.

The government has not yet responded to the consultation. In Powering Up Britain, it said it would amend relevant regulations by the end of 2023.[18]

14 Section 15 of the Planning Act 2008

15 DESNZ, Draft NPS EN-3 - Renewable energy infrastructure, March 2023, para 3.10.8

16 Section 82 of the Energy Act 2004; Part 14 of Schedule 2 of the General Permitted Development (England) Order 2015

17 DLUHC, Permitted development rights: supporting temporary recreational campsites, renewable energy and film-making consultation, February 2023

18 DESNZ, Powering up Britain: Energy Security Plan, last updated April 2023, section 6

2.1 Small-scale solar farms (below 50MW)

LPAs are responsible for determining planning applications for solar farms with a generating capacity under 50 MW. They will decide applications in line with their local plan unless 'material considerations' indicate otherwise.[19]

The scope of what constitutes a material consideration is not further defined in legislation. The courts have generally held, however, that private interests such as neighbouring property values are not material considerations.[20] The Planning Portal provides a non-exhaustive list of material considerations.

One important material consideration is the government's National Planning Policy Framework (NPPF). It also provides a framework against which LPAs draw up their local plans.

The NPPF notes that the planning system should promote renewable energy and associated infrastructure to meet the challenges of climate change:

> The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to [...] support renewable and low carbon energy and associated infrastructure.[21]

When deciding planning applications, the NPPF advises LPAs to give planning permission to renewable energy projects whose impacts are (or can be made) acceptable. It states that LPAs should "not require applicants to demonstrate the overall need for renewable and low carbon energy".[22]

Supplementary planning guidance on renewable and low-carbon energy sets out which factors LPAs should consider when assessing planning applications for solar farms and drawing up their local plans:

- the (cumulative) impact of solar panels on local amenity and landscape.
- the impact of solar farms may have on protected areas, such as Areas of Outstanding Natural Beauty (AONBs).
- that the need for renewable energy does not automatically override environmental protections.
- the siting, size, colour and design of solar systems.

19 Section 70(2) of the Town and Country Planning Act 1990; Section 38(6) of the Planning and Compulsory Purchase Act 2004

20 MHCLG and DLUHC, Determining a planning application, last updated July 2021, para 8

21 MHCLG, National Planning Policy Framework (NPPF), last updated July 2021, para 152

22 As above, para 158

- the visual impact of solar farms, in particular their impact on the local landscape in terms of "glint and glare" and on neighbouring uses.[23]

The planning guidance notes that, although large-scale solar farms can have "a negative impact" on rural landscapes, their visual impact can be "properly addressed within the landscape", for example, using "effective screening and appropriate land topography". It therefore states that ground-mounted solar systems do not necessarily have a negative impact on rural landscape.[24]

2.2 Large-scale solar farms (above 50MW)

Under the Planning Act 2008, as amended by the Localism Act 2011, major energy projects are consider 'nationally significant infrastructure projects' (NSIPs). They require 'development consent' from the Secretary of State for DESNZ.

The threshold above which solar farms are considered NSIPs and require development consent is set out in Part 3 of the Planning Act 2008: solar farms that have a generating capacity over 50MW are considered NSIPs.[25]

Applications for NSIPs are made to the National Infrastructure Directorate at the Planning Inspectorate, which will carry out an examination of the project and allow interested parties to share their views on the project. The Planning Inspectorate will issue a recommendation to the Secretary of State at the end of the examination process to help inform their decision.[26]

The final decision whether to grant, or refuse, development consent to an NSIP rests with the Secretary of State. If development consent is given, there is no need to obtain other consents, such as planning permission.[27] It can also confer other powers, such as compulsory purchase powers, on developers.

The Commons Library briefing, Planning for Nationally Significant Infrastructure Projects, sets out the process for DCOs. The Planning Inspectorate has published guidance on the application process.

National Policy Statements (NPSs)

The Secretary of State must decide applications for NSIPs in line with policies set out in National Policy Statements (NPSs). These are statutory documents

23 DLUHC and MHCLG, Renewable and low carbon energy, June 2015, para 7
24 DLUHC and MHCLG, Renewable and low carbon energy, June 2015, para 7
25 Section 15 of the Planning Act 2008; Section 31 of the Planning Act 2008
26 Part 6 of the Planning Act 2008; National Infrastructure Planning, Planning Inspectorate role, undated [accessed 23 June 2023]
27 Section 114 of the Planning Act 2008; Section 33 of the Planning Act 2008

that are designated under the Planning Act 2008 following a process of public consultation and parliamentary scrutiny.[28]

The overarching NPS EN-1 for energy (PDF) and the NPS EN-3 for renewable energy infrastructure (PDF) sets out the principles the Planning Inspectorate and the Secretary of State should follow when examining applications for development consent. The government is currently in the process of revising these NPSs (see section 3.2). Currently:

- The overarching NPS EN-1 notes there is an "urgent need" for new low carbon energy infrastructure. The UK should "dramatically" increase its renewable generation capacity and "wean itself off" its reliance on fossil fuels to reduce its greenhouse gas emissions.[29]

- The NPS EN-3 for renewable energy infrastructure does not include policies for solar farms.[30]

In the absence of a relevant policies in an NPS, the Secretary of State can still make decisions on NSIPs under section 105 of the Planning Act 2008. They will decide whether to give development consent in line with the NPPF and any relevant local plan for the area where a development would be located.[31]

2 Planning policy for battery energy storage systems

Renewable energy sources, such as solar, provide intermittent power. Battery energy storage systems (BESS) can support the use of renewable technologies by reducing supply issues caused by this intermittency. BESS do so by storing the electricity generated when there is surplus supply and making it available when demand is high or supply from renewable energy sources is low.[32]

Until 2020, BESS were treated as a form of generating stations in the planning system. Like other major energy projects, BESS above a threshold of 50MW were classed as NSIPS and required development consent.[33] The government removed BESS from the NSIP procedure in 2020 following consultation. Except pumped hydro, all BESS now require planning permission from the LPA.[34] Exceptions may apply where a BESS is deployed alongside another major energy projects (such as a solar farm) that requires development consent.

28 Section 5 of the Planning Act 2008; Section 104 of the Planning Act 2008

29 Department of Energy and Climate Change (DECC), National Policy Statements (NPSs) for energy infrastructure, July 2011, paras 2.2.5-2.2.6

30 DECC, NPS for renewable energy infrastructure (EN-3) (PDF), July 2011

31 Section 105 of the Planning Act 2008

32 National Grid, What is battery storage, last updated May 2023

33 BEIS, The treatment of electricity storage within the planning system, October 2019; BEIS, The planning system for electricity storage: follow up consultation, July 2020

34 Infrastructure Planning (Electricity Storage Facilities) Order 2020

2.3 Siting of solar farms

The NPPF advises LPAs to identify "suitable areas" for renewable energy projects.[35] Supplementary planning guidance on renewable and low-carbon energy states that "there are no hard and fast rules" on how LPAs should identify suitable areas, however, it states that they should take into account the potential impacts of solar farms on the local environment.[36]

The planning guidance on renewable and low-carbon energy notes, however, that large-scale solar farms should be located on previously developed and non-agricultural land that is not of "high environmental value" to encourage the "effective use of land".[37]

Siting on agricultural land

In general, the NPPF guides development, including renewable energy projects, away from the "best and most versatile" (BMV) agricultural land:

> Planning policies and decisions should contribute to and enhance the natural and local environment [...] by recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land [...].[38]

The concept of "best and most versatile" land is based on the agricultural land classification scheme. The scheme is used to grade agricultural land: BMV land is excellent to good quality land in grades 1, 2, and 3a.[39]

Where a developer can demonstrate that proposed use of agricultural land is necessary, the NPPF and supplementary planning guidance on renewable and low-carbon energy advise LPAs to use poorer- over higher-quality land. LPAs should also consider whether a proposal allows for continued agricultural use or encourage biodiversity improvements.[40]

3 Consultation of Natural England

Schedule 4 of the Development Management Procedure Order 2015 requires LPAs to consult Natural England on planning applications that will result in the loss of over 20 hectares of BMV agricultural land if the development of that land is not in accordance with their local plan.[41]

35 MHCLG, National Planning Policy Framework (NPPF), last updated July 2021, para 155
36 DLUHC and MHCLG, Renewable and low carbon energy, June 2015, para 5
37 DLUHC and MHCLG, Renewable and low carbon energy, June 2015, para 13
41 Schedule 4 of the Development Management Procedure (England) Order 2015

Natural England's Guide to assessing development proposals on agricultural land provides further information on what considerations LPAs must take into account when they assess applications for development for agricultural land.

Siting of solar farms on Green Belt land

It is the responsibility of local planning authorities to define and maintain Green Belt land in their local areas. The NPPF makes clear that renewable energy projects, including solar farms, are not "appropriate" development for Green Belt land except in "very special circumstances":

> When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits "associated with increased production of energy from renewable sources.[42]

In response to a parliamentary question in March 2022, the government said it was up to LPAs to assess whether "very special circumstances" existed based on the merits of each case.[43]

The Commons Library briefing on the Green Belt (February 2023) provides further information on Green Belt planning policy and proposals for reform.

2.4 Devolved administrations

Planning is a devolved matter. Decision-making arrangements for planning permission for solar farms differ across the UK, as set out below.

Wales

In Wales, solar farms will either require planning permission from the LPA or from Welsh Ministers or development consent from the Secretary of State for DESNZ depending on their size:

39 Natural England, Guide to assessing development proposals on agricultural land, last updated February 2021

40 MHCLG, National Planning Policy Framework (NPPF), last updated July 2021, footnote 58; DLUHC and MHCLG, Renewable and low carbon energy, June 2015, para 13

41 Schedule 4 of the Development Management Procedure (England) Order 2015

42 MHCLG, National Planning Policy Framework (NPPF), last updated July 2021, para 151

43 PQ 140431 [Batteries: Planning Permission] 15 March 2022

- Solar farms with a generating capacity **above 350MW** are considered NSIPs and require development consent from the Secretary of State for DESNZ under Section 15 of the Planning Act 2008.[44]

- Under the Planning (Wales) Act 2015, solar farms **between 10MW and 350MW** are considered developments of national significant (DNSs). They need planning permission from Welsh Ministers.[45]

- Solar farms with a generating capacity **below 10MW** require planning permission from the LPA. Solar systems up to 50kw are covered by permitted development rights and do not need planning permission.

Applications for NSIPs in Wales undergo the same process as applications for NSIPs in England: the Planning Inspectorate will examine the application and the Secretary of State will decide whether to grant it development consent.

Applications for DNSs are decided by Welsh Ministers in the same way as LPAs decide on other planning applications. Both decide applications for planning permission for development, including solar farms, in line with:

- relevant policies in the local development plan for the area where the project is proposed.

- Future Wales: the National Plan 2040 which is the Welsh Government's national development framework for Wales.

- other planning guidance: Planning Policy Wales which provides guidance on making planning decisions, Letters to Chief Planning Officers.

Proposals for reform

Currently, unlike under the NSIP regime where development consent also includes other consents, only planning permission is given under the DNS regime. The Welsh Government intends to replace the DNS regime with a "unified system" for major infrastructure projects.[46]

In June 2023, the Welsh Government introduced the Infrastructure (Wales) Bill. Under the proposed regime, solar farms and other energy projects with a capacity between 50MW and 350MW would be 'significant infrastructure projects' (SIPs) and require 'infrastructure consent' (IC) from Welsh Ministers.

The application and approval process for SIPs in Wales would be similar to the NSIP regime. As is the case with development consent, infrastructure

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44 Section 15 of the Planning Act 2008

45 Section 19 of the Planning (Wales) Act 2015, which added section 62D to the Town and Country Planning Act 1990; Section 39 of the Wales Act 2017

46 Welsh Parliament/Senedd Cymru, Infrastructure (Wales) Bill, June 2023; Welsh Government, Infrastructure (Wales) Bill 2023, June 2023

consent would mean that there is no need to obtain other consents, such as planning permission or compulsory purchase powers.[47]

For further information, see the Senedd Research Service's briefings on a new infrastructure consenting process for Wales (last updated May 2021) and the Infrastructure (Wales) Bill: what does it do and what happens next? (June 2023).

Scotland

Unlike in Wales, in Scotland, the UK Government is not involved in decision-making on planning applications for solar farms regardless of their size.

- Applications for solar farms with a generating capacity **exceeding 50MW** are made to the Scottish Government's Energy Consents Unit (ECU) and decided by Scottish Ministers.[48]

- All other applications for solar farms are made to, and decided by, the relevant LPA.[49] In Scotland, there is a distinction between 'local' and 'major' developments:

  - Solar farms that have a generating capacity **exceeding 20MW** are major developments. Like local developments, they are decided by the relevant LPA.[50]

  - However, applicants need to consult the local community for major developments prior to submitting a planning application.

Scottish Ministers will consider applications for large-scale solar farms on a "case-by-case basis".[51] If an LPA objects to an application, the Planning and Environmental Appeals Division (DPEA) will hold a public inquiry and prepare a report with recommendations for the Scottish Minister making a decision on the application.[52] The Minister must take the inquiry report into account when making their decision on the application.[53]

LPAs will decide planning applications – including for solar farms – in line with their local plan, unless "material considerations" indicate otherwise".

47 Written Statement: Introduction of the Infrastructure (Wales) Bill (12 June 2023) | GOV.WALES
48 Section 36 of the Electricity Act 1989; Scottish Government, Energy and Climate Change Directorate, Energy infrastructure: Energy consents, undated [accessed 23 June 2023]
49 Section 26A of the Town and Country Planning (Scotland) Act 1997
50 Scottish Government, Scottish Planning Series Circular 5 2009: Hierarchy of Developments, July 2009; Schedule of the Hierarchy of Developments (Scotland) Regulations 2009
51 Scottish Government, Electricity Act 1989 – sections 36 and 27: applicants guidance, February 2022, paras 8.1.1-8.1.3
52 As above, para 6.2
53 As above, para 7.1.4

In drawing up their local plans and deciding planning applications, LPAs are guided by the Scottish Government's National Planning Framework (NPF). The latest version of the NPF, the NPF4, was adopted in February 2023.[54]

Northern Ireland

As in Scotland, there is a three-tier hierarchy in Northern Ireland: 'regionally significant' developments, 'major' developments and 'local' developments. Depending on their size, solar farms will fall into either of these categories:

- Solar farms with a generating capacity **above 30MW** may be considered 'regionally significant' developments.[55] Whether a solar farm of that size is regionally significant is decided by the Department for Infrastructure:
  - Applicants are required to consult the Department to establish if it considers a development of that size to be "significant to the whole or a substantial part of Northern Ireland". In that case, applications would be made to, and determined by, the Department.
  - Otherwise, the Department will advise an applicant to apply to the LPA for planning permission.[56]
- All other applications for solar farms with a generating capacity **below 30MW** are made to, and would usually be determined by, the LPA. As in Scotland, there is a distinction between 'local' and 'major' developments:
  - Solar farms with a generating capacity **between 5MW and 30MW** are classed as 'major' developments.[57] Applicants are required to carry out a pre-application consultation with the local community for applications for major development.
  - Proposals for major developments also have to be decided by a committee of the council. If the nature and scope of a proposal raises issues of regional significance, the Department may use its 'call-in powers' so it can make a decision on the application.[58]

Ministers and LPAs will determine planning applications, including for solar farms, in line with the local development plan for the area, the Regional

54 Scottish Government, National Planning Framework 4, February 2023
55 Schedule of the Planning (Development Management) Regulations (Northern Ireland) 2015
56 Section 26 of the Planning Act (Northern Ireland) 2011; Department for Infrastructure: Development Management Practice Notes: Development Management Practice Note 01: Hierarchy of developments (PDF), December 2018
57 Schedule of the Planning (Development Management) Regulations (Northern Ireland) 2015
58 Department for Infrastructure: Development Management Practice Notes: Development Management Practice Note 01: Hierarchy of developments (PDF), December 2018

Development Strategy (RDS) for Northern Ireland 2035 and the Department's Strategic Planning Policy Statement (SPPS).[59]

Between April and June 2023, the Department for Infrastructure consulted on revisions to the policies on renewable and low carbon energy in the SPPS. The changes intend to better align planning policies with the Executive's Energy Strategy and the Climate Change (Northern Ireland) Act 2022, which set a target of meeting 80% of electricity consumption from renewable sources.[60]

[59] Department for Infrastructure, Regional Development Strategy 2035, March 2012; Department for Infrastructure, Strategic Planning Policy Statement, last updated May 2023

[60] Department for Infrastructure, Review of Regional Strategic Planning Policy on Renewable and Low Carbon Energy - Public Consultation, last updated June 2023

3 Proposed reforms to planning policy

To achieve its ambition of a fivefold increase in solar power by 2035 (14GW to 70GW) and a fully decarbonised power system by 2050, the UK Government said that the "deployment of both ground and rooftop solar" would need to be maximised. It noted the "huge potential" of solar power contribute to the decarbonisation of the power sector.[61]

In Powering up Britain (March 2023), the government noted that an "effective planning system" was needed to support the deployment of renewable energy infrastructure. The government said that it was "committed to ensuring faster, fairer and more effective planning regimes":

> The planning system is central to delivering our ambitious programme of net zero infrastructure development and building out the clean generation and grid capacity that will power our economy. An effective planning system is needed to support both large scale nationally significant infrastructure [...] and support local decisions on renewable and low carbon energy. That is why in order to support our net zero and energy security goals, the government is committed to ensuring faster, fairer, and more effective planning regimes.[62]

To this end, the government said that it would make changes to the NPPF and energy NPSs as well as reforms to speed up the NSIP decision-making process (see below). It also said that it would consult on expanding permitted development rights for rooftop solar installations (see box 1).

Given the scale and speed of infrastructure development needed, however, the government said further planning reform may be required.[63]

3.1 Small-scale solar farms: Update of the NPPF

The Levelling Up and Regeneration Bill is awaiting its third reading in the House of Lords.

The government said it would update the NPPF, including policies relevant to the deployment of solar power, as part of a package of planning reforms that it said it would deliver alongside the Levelling Up and Regeneration Bill 2022-23. It consulted on the proposed updates to the NPPF between December 2022 and March 2023. It has not yet responded to the consultation.[64]

Specifically, the government proposed amending the NPPF to:

61 DESNZ, Powering Up Britain, last updated April 2023
62 DESNZ, Powering Up Britain: Net Zero Growth Plan, last updated April 2023
63 DESNZ, Powering Up Britain: Net Zero Growth Plan, last updated April 2023
64 DLUHC, Levelling-up and Regeneration Bill: Reforms to national planning policy, December 2022

- make it easier for generators to repower existing renewables projects. The updated NPPF would advise LPAs to approve applications for repowered sites where their impact "are or can be made acceptable". [65]

- require LPAs to consider the "the relative value of agricultural and for food production" when assessing and determining applications for "significant development" on agricultural land.[66]

The siting of solar farms on agricultural land was raised in the Conservative party leadership campaign in 2022.[67] In October 2022, the Guardian reported that the Secretary of State for Defra under Liz Truss, Ranil Jayawardena, was considering expanding the definition of BMV land to also include grade 3b "moderate quality" agricultural land.[68]

In its Powering up Britain strategy (March 2023), the government confirmed that it would not make "changes to categories of agricultural land":

> Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land. We consider that meeting energy security and climate change goals is urgent and of critical importance to the country, and that these goals can be achieved together with maintaining food security for the UK. [...] The government will therefore not be making changes to categories of agricultural land in ways that might constrain solar deployment.[69]

3.2 Large-scale solar farms

Fast-track consent route for NSIPs

The government has highlighted the average length of time for a decision to be made on proposed NSIPs has increased from 2.6 years in 2012 to 4.2 years in 2021. The government has argued that "the system does not always move with the focus and speed we need".[70]

In the National Infrastructure Strategy (2020), the government said it would reform the NSIP process to make it "better, faster and greener" – an ambition that it restated in the British Energy Security Strategy (April 2022). Following

65 DLUHC, NPPF: Draft text for consultation (PDF), December 2022, para 160

66 DLUHC, Levelling-up and Regeneration Bill: Reforms to national planning policy, December 2022, chapter 7, para 11; DLUHC, NPPF: Draft text for consultation (PDF), December 2022, footnote 67

67 Rishi Sunak: We won't lose our best farmland to solar panels, The Telegraph, 18 August 2022 [accessed 17 July 2023]; 'Our fields shouldn't be full of solar panels': Truss vows to crackdown on renewables development, Business Green, 2 August 2022 [accessed 17 July 2023]

68 Ministers hope to ban solar projects from most English farms, The Guardian, 10 October 2022 [accessed 17 July 2023]

69 DESNZ, Powering Up Britain, last updated April 2023

70 DLUHC, Nationally Significant Infrastructure Projects (NSIP) reforms: action plan, February 2023

an operational review of the NSIP process in 2021, the government introduced reforms in the Levelling Up and Regeneration Bill 2022-23.

The proposed changes would give the relevant Secretary of State (for solar farms, the Secretary of State for DESNZ) the power to shorten the timeframe for examination and create a fast-track consent route for certain NSIPs that meet "quality standards". The government indicated that the fast-track route would reduce the examination period to 12 months.[71]

The government said it would consult on the fast-track consent route in 2023,[72] trial the route on pilot projects from September 2023 and bring forward the required regulations and guidance changes by spring 2024.[73]

A February 2023 action plan sets out other proposals by the government to speed up the NSIP process, including improving the pre-application process to resolve issues ahead of examination and speed up the consenting process. In July 2023, the Planning Inspectorate launched a trial for the proposed pre-application with 7 NSIPs, including three solar farms.[74]

Revised NPSs for energy and renewable infrastructure

In its Energy White Paper (November 2020), the government committed to updating energy-related NPSs to make sure they could support a transition to net zero.[75] In the White Paper, the government set the aim of designating the updated NPSs by the end of 2021. Prior to designating an NPS, the government is required to subject it to public consultation and parliamentary scrutiny.[76]

The government consulted on its proposed updates to the energy NPSs in 2021.[77] The government responded to the consultation in March 2023 and published further revised drafts of the five energy NPSs.[78] The government said it would designate the updated energy NPSs by the end of 2023.[79]

Until the revised NPSs are officially designated by the government, the current NPSs remain in force. However, as set out in the consultation, "any emerging

71 DESNZ, Powering Up Britain, last updated April 2023

72 DLUHC, Improving performance of the NSIP planning process and supporting local authorities, August 2022; DLUHC, Fast-track planning route to speed up major infrastructure projects, August 2022; DLUHC, Nationally Significant Infrastructure Projects (NSIP) reforms: action plan, February 2023

73 DLUHC, Nationally Significant Infrastructure Projects (NSIP) reforms: action plan, February 2023

74 Planning Inspectorate, Planning Inspectorate launches pre-application trial with 7 Nationally Significant Infrastructure Projects, July 2023

75 DESNZ and BEIS, Energy white paper: Powering our net zero future, last updated December 2020

76 Section 7 of the Planning Act 2008

77 DESNZ and BEIS, Planning for new energy infrastructure: review of energy National Policy Statements, last updated March 2023

78 DESNZ, Planning for new energy infrastructure: revisions to National Policy Statements, May 2023

79 DESNZ, Powering Up Britain, last updated April 2023

draft NPSs [...] are potentially capable of being important and relevant considerations in the decision-making process".[80]

A presumption in favour of granting consent

The updated NPS EN-1 emphasises the government's commitment to reducing its reliance on imported oil and gas and to decarbonising power generation to tackle carbon emissions and ensure the security of its energy supply.

It would advise the Secretary of State to give "substantial weight" to the need for new energy infrastructure when assessing applications for NSIPS.[81] The updated NPS EN-1 notes there is "a presumption in favour of granting consent to applications for energy NSIPs" unless other policies set out the relevant NPSs "clearly indicate that consent should be refused".[82]

Examples of when other policies might indicate that consent should be refused include the following:

- A Secretary of State should only refuse development consent to NSIPs in nationally designated areas (such as National Parks, the Broads, AONBs) except in "exceptional circumstances". These circumstances exist, for example, if the adverse impacts of a project are "clearly outweighed by the environmental, social and economic benefits".[83]

- There is also a presumption against inappropriate development on the Green Belt. The Secretary of State should refuse development consent except in "very special circumstances" to NSIPs on Green Belt land.[84]

Siting of solar farms on agricultural land

The draft updated NPS EN-3 would advise that, although land type should not be the predominating factor in determining site location, applicants should locate solar farms on previously developed and non-agricultural land "where possible". It acknowledges, however, that the use of brownfield land is not always possible and, sometimes, the use of agricultural land is necessary.[85]

In that case, like the NPPF, the updated NPS EN-3 states that it is preferable to use poorer- over higher-quality agricultural land and that development should not take place on BMV land "where possible". However, it explicitly states that ground-mounted solar farms on agricultural land, including on BMV land, are not prohibited.[86]

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80 DESNZ, Planning for New Energy Infrastructure: Revised draft NPSs (PDF), March 2023, p8
81 DESNZ, EN-1 Overarching National Policy Statement for Energy (PDF), March 2023, paras 3.2.5-3.2.6
82 DESNZ, EN-1 Overarching National Policy Statement for Energy (PDF), March 2023, para 4.1.3
83 DESNZ, EN-1 Overarching National Policy Statement for Energy (PDF), March 2023, para 5.10.31
84 DESNZ, EN-1 Overarching National Policy Statement for Energy (PDF), March 2023, para 5.11.20
85 DESNZ, NPS EN-3 - Renewable energy infrastructure (PDF), March 2023, paras 3.10.14-3.10.16
86 DESNZ, EN-1 Overarching National Policy Statement for Energy (PDF), March 2023, para 5.11.12

4 Stakeholder views and commentary

4.1 Siting of solar farms on agricultural land

Some organisations have raised concerns about the siting of solar farms on agricultural land and its implications for food security. For example, CPRE (formerly the Council for the Protection of Rural England) expressed concern that "valuable farmland" was often the "location of choice" for solar farms. The organisation argued that it was "essential" to preserve agricultural land for farming purposes and food production. [87]

CPRE argued that solar farms should not be sited on BMV land (see section 2 for a definition) unless "the most compelling evidence" exists.[88] CPRE and other groups, including the National Association for Local Councils (NALC) and the Community Planning Alliance, have called for better protection of BMV land for food production.[89]

In an evidence session with the Environmental Audit Committee, the head of planning and policy of CPRE questioned "whether there is a need to develop any BMV land at all" to meet the government's renewable energy targets.[90] The organisation has argued that there is sufficient capacity on brownfield land, domestic and commercial rooftops, and carparks for solar panels:

> Analysis by CPRE [...] shows that if only a quarter of the UK's total 250,000 hectares of south-facing commercial roof space was useable, it could generate 25 gigawatts of electricity annually. With good planning and design, 20,000 hectares of car parking space could potentially yield an additional 8 gigawatts of solar capacity alongside tens of thousands of new homes.[91]

Renewable energy groups, such as Solar Energy UK, have argued that "solar farms pose no threat to the UK's food security".[92] Solar Energy UK has argued that, even with a fivefold increase in solar power (to meet the government's target), solar systems would have "minimal if any impact" on food security".[93]

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87 CPRE, CPRE statement on solar energy, February 2022; Lords Land use in England Committee, Written evidence: Land use in England (PDF), HL 2021-22, LUE0055 [CPRE]

88 CPRE Hertfordshire, The problem with solar farms (PDF), October 2021

89 EFRA Committee, Written evidence: Food security (PDF), HC 622 2021-22, FS0001 [Community Planning Alliance]; Lords Land Use in England Committee, Written evidence: Land use in England (PDF), HL 2021-22, LUE0081 [National Association of Local Councils]

90 Environmental Audit Committee (EAC), Oral evidence: Technological innovations and climate change: onshore solar energy (PDF), HC856, 11 January 2023, Q62

91 CPRE, Unleash rooftop solar to tackle energy crisis, we urge Chancellor, November 2022

92 Solar Energy UK, Conservative Party Members back solar farms, 28 July 2022

93 Solar Energy UK, Solar farms and food security: The Facts, September 2022; EAC, Written evidence: onshore wind (PDF), OSE0001 [Solar Energy UK]

The environment and wildlife group, Wildlife and Countryside Link, also said that it considers solar farms to have "an insignificant impact on agricultural land". Compared to building development, it said that solar farms did not "pose enough of a threat to food security" to warrant a policy response:

> Building development on prime agricultural land is also putting a strain on the UK's food system. [...] By contrast, solar farms are having an insignificant impact on prime agricultural land at present. [...] While all types of land use and competing pressures must be monitored, the evidence at this moment in time suggests that solar farms do not remotely pose enough of a threat to food security as the other issues identified, meaning that they do not warrant a policy response as a priority.[94]

Solar Energy UK has opposed changes to the land classification system which, it said, would have restrict solar farm development.[95] The Country Land and Business Association (CLA), an organisation which represents landowners, welcomed the government statement in Powering Up Britain that it would not make changes to the classification of agricultural land.[96]

Solar Energy UK has expressed concern about the government's proposed changes to the NPPF. These changes, it said, could "result in food production being raised above all other material planning considerations" and "severely restrict other necessary land uses", such as renewable energy generation.[97]

The deputy president of the National Farmers Union (NFU) has argued for "a balance to ensure we can continue to produce quality, sustainable food [...] while also delivering on our net zero ambition". The NFU said its preference is for solar farms to be located on "low quality agricultural land, avoiding the most productive and versatile soils".[98]

Multi-functional land use: 'agri-voltaics'

Research has explored whether it is possible to use land for both solar power and agricultural purposes (livestock or crops). The multifunctional use of land for both renewable energy and farming is called 'agri-voltaics'.[99] Examples of agricultural uses that can be combined with solar systems include:

94 EFRA Committee, Written evidence: Food security (PDF), HC 622 2021-22, FS0046 [Wildlife & Countryside Link]

95 EAC, Written evidence: onshore wind (PDF), OSE0001 [Solar Energy UK]

96 Country Land and Business Association (CLA), Blog: Powering up Britain, last updated April 2023

97 Solar Energy UK, Levelling-up and Regeneration Bill: Reforms to national planning policy, March 2023

98 Philip Case, Petition launched to stop solar farms on productive farmland, Farmers Weekly, 27 January 2022 [accessed 28 November 2022]; NFU, Solar photovoltaic electricity in agriculture, 17 December 2021

99 For example: Al Mamun and others A review of research on agrivoltaic systems, Renewable and Sustainable Energy Reviews, 2022, 161; Eric J Stallknecht and others, Designing plant–transparent agrivoltaics, Nature: Scientific Reports, 2023, 13 (1903)

- Some low-growing crops that are usually harvested by hand, such as berries or lettuce, could be planted underneath solar panels.
- Some animals, such as sheep, could graze between and underneath raised solar panels.[100]

Some research has highlighted agri-voltaics as a way to address the potential competition between land use for farming and land use for renewable energy. It also notes that agri-voltaics may allow farmers to supplement their income by installing solar panels on their land. Not all crops are suited to growing in the shade of solar panels, however, and solar panels may need to be spaced further apart (or moveable) to allow farm machinery to pass through them.[101]

Renewable energy groups, such as the Solar Power Portal and Solar Energy UK, point to 'agri-voltaics' to highlight that solar power and farming are not necessarily mutually exclusive.[102] The NFU also noted that multi-functional land use, such as grazing sheep on solar farms, could be a way to address competing land pressures of energy infrastructure and food security.[103]

Solar Energy UK has also argued that because planning permission for solar farms is usually time-limited and solar systems can be dismantled, land can be returned to agricultural use.[104] In an evidence session with the EAC, Dr Armstrong, a senior lecturer in energy at Lancaster University, noted that she was not "aware of any sites that have been depowered", however.[105]

Other organisations, however, have criticised the viability of 'agri-voltaics'. For example, CPRE argued that sheep grazing underneath solar panels was only a "token gesture" that did not compensate for the "lost potential of the land".[106] The NALC have also argued that "chemicals used to clean the solar panels" would render the land underneath them unusable for grazing.[107]

How much farmland is used for solar farms?

It is not possible to estimate how much 'best and most versatile' agricultural land in the UK is currently occupied by solar farms, for the following reasons:

100 Carbon Brief, Factcheck: Is solar power a 'threat' to UK farmland?, 25 August 2022
101 Claude Grison and others, Photovoltaism, Agriculture and Ecology : From Agrivoltaism to Ecovoltaism [accessed via Library subscription], John Wiley & Sons, 2022, p38
102 Solar Energy UK, Solar farms and food security: The Facts, September 2022; Solar Power Portal, Balancing energy security with food security on solar farms, 26 July 2022
103 Land use in England Committee, Written evidence: Land use in England (PDF), HL 2021-22, LUE0049
104 Solar Energy UK, Solar Farms & Food Security: The Facts, September 2022
105 EAC, Oral evidence: Technological innovations and climate change: onshore solar energy (PDF), HC 856, 11 January 2023, Q75
106 CPRE Hertfordshire, The problem with solar farms (PDF), October 2021
107 Land use in England Committee, Written evidence: Land use in England (PDF), HL2021-22, LUE0081

- Agricultural land classification (ALC) data published by Natural England does not differentiate between grade 3a land (which classified as BMV land) and grade 3b land (which is not BMV land).
  - As Dr Armstrong, a senior lecturer in energy at Lancaster University, highlighted in an evidence session with the Environmental Audit Committee, the ALC data is outdated and therefore "not accurate".
  - It also does not distinguish between 3a and 3b grade agricultural land. Therefore, where planning applications may affect BMV land, CPRE noted that site-specific surveys are done to determine whether the land is 3a or 3b grade agricultural land.[108]
- The renewable energy planning database includes data on the capacity of solar systems that are granted (or refused) planning permission and their location. However, it does not include data on their size. The size of a solar farm will differ depending on the spacing between solar panels, the efficiency of the technology used and whether they are co-located with a battery storage system.

CPRE has criticised the lack of available data and lack of reporting on the use of BMV land.[109] CPRE and other organisations have attempted to estimate how much land, including BMV land, is used for solar farms and how much land is required to meet the government's targets.

In a report on Building on our food security (July 2022), CPRE found 14,000 hectares of BMV land have been allocated for development use since 2010 (0.6% of all BMV land). CPRE estimated that 1,400 hectares of BMV land had been developed for renewable energy uses, such as solar farms.[110]

Solar Energy UK estimates that, assuming around 6 acres of land are required for every MW of solar power, solar panels currently cover around 230 square kilometres or 0.1% of total land in the UK. By 2050, under the net zero target, "solar farms would at most account for approximately 0.4-0.6%" of the UK.[111]

Carbon Brief estimates that, assuming solar farms need around three acres to produce 1MW of power, solar farms will cover 700 square kilometres of land (or 0.3% of the UK's land surface) by 2035. The article concludes:

> Ground-mounted solar power is built on several types of land. However, even if all future ground-mounted solar was built on farmland, the impact on UK food production as a result of the change in land use would be small.[112]

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108 EAC, Oral evidence: Technological innovations and climate change: onshore solar energy (PDF), HC 856, 11 January 2023, Q68

109 CPRE, Building on our food security, July 2022

110 CPRE, Building on our food security, July 2022

111 Solar Energy UK, Everything Under the Sun: The Facts About Solar Energy, March 2022

112 Carbon Brief, Factcheck: Is solar power a 'threat' to UK farmland?, 25 August 2022

Solar Energy UK and Carbon Brief do not provide separate estimates for the amount of farmland and other types of land. Evidence submitted to the Environmental Audit Committee by the University of Sheffield, Open Climate Fix (a research lab focused on reducing emissions) and Exawatt (a consulting company focused on renewable natural resources) notes, however, that the land required for solar farms may not be evenly distributed across the UK:

> To achieve 70 GW (approximately 5 times the current capacity) we assume that between 5 and 7 times the current area occupied by solar PV will be required. Current land use by PV is 24,400 ha or 0.1% of the total land in the UK. Scaling up between 5 and 7 times leads to between 125,000 ha and 175,000 ha being needed (or 0.5 to 0.7 % of the total land).
>
> "Best and most versatile land" (BMVL) refers to agricultural grades 1 to 3a, and Utilised Agricultural Area (UAA) is 17.2 million ha, or 71% of the UK land. Ground-mounted solar parks will not be evenly distributed across the UK, so while 0.5 to 0.7% of the total UK land area may be considered small, this land use change will be concentrated in some areas e.g. south England.[113]

4.2 Committee reports

During the Conservative party leadership campaign in the summer of 2022, there was discussion about limiting the amount of land available for solar farms in the countryside.[114] In October 2022, the Guardian reported that the Defra Secretary under Liz Truss was considering expanding the definition of BMV land to also include grade 3b "moderate quality" agricultural land.[115]

In its report on Accelerating the transition from fossil fuels and securing energy supplies (PDF, January 2023), the Environmental Audit Committee (EAC) concluded that "moves to limit the land available for solar installations will make it harder to achieve the Government's stated ambition in the British Energy Security Strategy to increase solar capacity to 70GW by 2035".[116]

The committee also recommended that the government should require developers to install solar panels on roofs of new builds.[117] The government responded that, under its planned uplift to the energy efficiency standards of new builds from 2025, it expected developers to choose solar panels or other

113 EAC, Written evidence: Technological innovations and climate change: onshore solar energy (PDF), HC 856, OSE0040 [Exawatt, Open Climate Fix, the University of Sheffield]

114 Rishi Sunak: We won't lose our best farmland to solar panels, The Telegraph, 18 August 2022 [accessed 17 July 2023]; 'Our fields shouldn't be full of solar panels': Truss vows to crackdown on renewables development, Business Green, 2 August 2022 [accessed 17 July 2023]

115 Ministers hope to ban solar projects from most English farms, The Guardian, 10 October 2022 [accessed 17 July 2023]

116 Environmental Audit Committee (EAC), Accelerating the transition from fossil fuels and securing energy supplies HC 109, Fourth Report of Session 2022-23, January 2023, para 100

117 As above, para 119

low-carbon technologies, such as heat pumps. It said it would therefore be "redundant" to mandate the installation of solar panels.[118]

The Environmental Audit Committee held two evidence sessions on onshore solar energy in the UK in January 2023. Some of the issues discussed in these evidence sessions are set out in section 4.1 of this debate pack.

The siting of solar farms on agricultural land was also raised in the Lords Land Use Committee's inquiry on Land Use in England, the Environment, Farming and Rural Affairs (EFRA) Committee's inquiry on Food Security, and the EAC's inquiry on Environmental change and food security. The EFRA and Environmental Audit Committee have not yet published their reports.

In its report on Making the most out of England's land (PDF, December 2022) the Lords Land Use Committee called on the government to develop the land use framework to identify what land should be used for which purposes.[119] The committee noted that, although the NPPF discouraged development on BMV land, evidence showed that "too many exceptions are being made".[120]

The committee also recommended that the government should put in place "stricter regulations … to prevent the development of solar farms on BMV land" and adopt "a consistent policy" on the installation of solar panels on the roofs of industrial, commercial and domestic buildings.[121]

In its response to the committee, the government noted its target of a fivefold increase in solar deployment by 2035 would require "sustained growth in both rooftop and ground-mounted capacity".[122]

4.3 Skidmore review

The independent review of net zero (the 'Skidmore review', January 2023) also called on the government to publish a land use strategy. It highlighted that:

> […] solar farms in the countryside should not be planned piecemeal but in a co-ordinated fashion as part of a Land Use Strategy.[123]

However, the review also called on the government to remove technology-specific restrictions on the siting of renewable projects "where applicable", as it said these added "unnecessary burden" to the planning process. Instead, it

118 Accelerating the transition from fossil fuels and securing energy supplies: Government and Regulator Response to the Committee's Fourth Report (PDF), March 2023, para 60
119 Lords Land Use Committee, Making the most out of England's land, HL Paper 105, Report of Session 2022–23, December 2022, para 156
120 As above, para 132
121 As above, para 132
122 Government response to the Land Use Committee report 'Making the most out of England's land' (PDF), April 2023, para 20
123 DESNZ and BEIS, Independent review of net zero (Skidmore review), January 2023, para 268

recommended that the government should publish clear guidance on allow "case-by-case decisions" on renewable energy projects.[124]

In its response to the review, the government pointed to its objective in its Food Strategy (June 2022) to publish a Land Use framework in 2023. It also pointed to existing guidance (the NPPF and supplementary planning practice guidance), stating that it would not publish further guidance.[125]

[124] DESNZ and BEIS, Independent review of net zero (Skidmore review), January 2023, para 248

[125] DESNZ, Independent Review of Net Zero: government response, March 2023, para 28 and para 48; Defra, Government food strategy, June 2022, para 17

5 Further reading and parliamentary material

5.1 Further reading

- CPRE, Rooftops can provide over half our solar energy targets, report shows, May 2023
- CPRE, Solar energy and the countryside, May 2023
- Solar Power Portal, UK government's 'Green Day' plan shows welcome support for solar, March 2023
- To bring communities with us on solar, we shouldn't ignore the agricultural benefits, The Planner, 30 March 2023
- Gloucestershire solar farm plans turned down, BBC News, 21 March 2023
- Solar Energy UK, Ground mounted solar farms and agricultural land: The Facts, December 2022
- CPRE, Unleash rooftop solar to tackle energy crisis, we urge Chancellor, November 2022
- Carbon Brief, Factcheck: Is solar power a 'threat' to UK farmland?, August 2022
- Solar Power Portal, Balancing energy security with food security on solar farms, July 2022
- CPRE, Building on our food security, July 2022
- World Economic Forum, What's agrivoltaic farming? Growing crops under solar panels, July 2022
- Solar Energy UK, Everything Under the Sun: The Facts About Solar Energy, March 2022
- Energy Monitor, The farmers profiting from the solar power boom, February 2022
- National Farmers Union (NFU), Solar farms and the British landscape, June 2021
- Solar Power Portal, Agri-PV: how solar enables the clean energy transition in rural areas, September 2020

5.2 Parliamentary questions

Buildings: Solar Power

Asked by: Lord Taylor of Goss Moor

To ask His Majesty's Government what assessment they have made of the potential costs and benefits of requiring plans for all new commercial and public car parks to include solar panels.

Answering member: Baroness Scott of Bybrook | Department: Department for Levelling Up, Housing and Communities

We recently consulted on proposals for a new permitted development right which would enable the construction of solar canopies in ground-level off-street car parks in non-domestic settings without a planning application. Further announcements will be made in due course.

HL Deb 12 July 2023 | PQ HL9007

Solar Power: China

Asked by: Khan, Afzal

To ask the Secretary of State for Energy Security and Net Zero, what assessment he has made of the implications for his policies of the findings of the report by the International Energy Agency entitled Special Report on Solar PV Global Supply Chains, published in August 2022 on China's increasing share of the solar panel supply chain.

Answering member: Graham Stuart | Department: Department for Energy Security and Net Zero

The Department has noted the findings of the IEA report.

The Solar Taskforce will focus on identifying and taking forward the actions needed to develop resilient, sustainable and innovative supply chains, to support the significant increases in deployment of solar panels needed to meet the UK's net zero and energy security goals.

The Government already encourages large-scale developers accessing its flagship Contracts for Difference scheme to grow the supply chain through the Supply Chain Plan process and supports supply chain innovation through a range of schemes, such as the Energy Entrepreneurs Fund, and initiatives funded by UK Research and Innovation.

HC Deb 12 July 2023 | PQ 192432

Energy Security: Gas Imports from Russia

Asked by: Caroline Lucas

A recent report by the Energy and Climate Intelligence Unit shows that, regardless of Ministers' plans to expand domestic oil and gas production, imports of gas will continue to rise significantly unless we tackle demand. New oil and gas licences simply will not deliver energy security as the oil and gas is sold at global prices on international markets. They will cost the taxpayer dearly while being a disaster for the climate. Will the Government finally do what is needed by ruling out new licences and committing instead to measures that will genuinely make the UK energy secure, including a nationwide street-by-street home insulation programme, unblocking onshore wind, and installing new solar on every roof?

Answered by: Grant Shapps | Department: Energy Security and Net Zero

We have gone from 14% of our homes being insulated under the previous Government to nearly 50%—it will be 50% this year—and we have set up an energy taskforce to reduce the usage of energy and make it more efficient. However, the policy of the hon. Lady's party, and that of the official Opposition, of importing all the oil and gas that we require and not providing new licences is simply insane. It means that every single family in Britain will be subject to the next tyrant like Putin, and that the carbon used will be double what is taken from the North sea. It is bonkers policy.

HC Deb 04 July 2023 | Vol 735 c682

Clean Energy Projects: Planning System

Asked by: James Gray

Local authorities have a presumption in favour of solar, and quite right, too, but should they not also consider the cumulative effect of solar farms? Wiltshire is the second largest county in England for solar farms. If the new Red Barn project at Kington St Michael is added, it will be one of the largest solar farms in Britain. We are covering our good agricultural land with solar farms in counties such as Wiltshire. When the forthcoming planning policy guidance is reconsidered, will the Minister undertake to include a presumption against solar farms on grade 3a and 3b agricultural land?

Answered by: Andrew Bowie | Department: Energy Security and Net Zero

Food security is incredibly important, and we will, of course, prioritise less productive land for the deployment of solar farms. Our reforms aim to ensure that infrastructure developers consider, at the outset of their programmes,

how projects can address the legitimate concerns of affected communities, engaging regularly with them throughout the pre-application phase and beyond. Engaging with statutory consultees early during the pre-application stage will also benefit local communities and farmers through high-quality applications.

HC Deb 04 July 2023 | Vol 735 c681

Solar Power

Asked by: Baroness Bennett of Manor Castle

To ask His Majesty's Government what assessment they have made of the Campaign for the Protection of Rural England's report Shout from the rooftops, published on 23 May, regarding the recommendation for a target for 60 per cent of solar energy to come from rooftop, brownfield, and grey spaces; and whether they plan to set such a target.

Answering member: Lord Callanan | Department: Department for Energy Security and Net Zero

The Government is aiming for 70 gigawatts of solar capacity by 2035 which will require significant increases in deployment of all types of solar – rooftop on domestic, industrial, and commercial buildings; and ground-mount mainly on brownfield, industrial and low and medium grade agricultural land.

The Government has no plans to set sub targets for solar as flexibility is needed to allow for technology changes and emerging opportunities out to 2035.

HL Deb 28 June 2023 | PQ HL8473

Agriculture: Land Use

Asked by: Baroness Bennett of Manor Castle

To ask His Majesty's Government whether the forthcoming national land use frameworks will balance the competing demands for agriculture, development, energy, and infrastructure in a way that actively promotes the installation of solar panels on suitable brownfield land and rooftops.

Answering member: Lord Benyon | Department: Department for Environment, Food and Rural Affairs

The Government considers that there is a strong need for increased solar deployment. As set out in the Energy Security Plan in March 2023, deploying rooftop solar remains a key priority for the Government. To meet our

objectives for energy security and climate change, we will also need to make significant use of ground-mounted solar development mainly on brownfield, industrial and low and medium grade agricultural land. The Government encourages deployment of solar technology that delivers environmental co-benefits, with consideration for ongoing food production.

Meeting energy security and climate change goals is urgent and of critical importance to the country, and these goals can be achieved together with maintaining food security for the UK. We recognise that, as with any new development, solar projects may impact on communities and the environment. The planning system allows all views to be taken into account when decision makers balance local impacts with national need.

Striking the right balance between different land uses is a challenging task, which will involve trade-offs. There are many uses of our land that we need to anticipate for the future: growing food, planting trees, building homes, natural habitats, energy, land for infrastructure, and leisure and recreation. The Land Use Framework for England, to be published this year, will help to inform how we manage trade-offs and maximise co-benefits on the land, thereby supporting the delivery of multifunctional landscapes that will be dependent on the local context and national needs

HL Deb 26 June 2023 | PQ HL8474

National Grid: Renewable Energy

Asked by: Lake, Ben

To ask the Secretary of State for Energy Security and Net Zero, whether his Department has made an assessment of the potential role of (a) heat pumps, (b) EV charging points, (c) solar PV and (d) other low carbon technologies in offsetting the energy demand of new housing developments on the grid.

Answering member: Andrew Bowie | Department: Department for Energy Security and Net Zero

Analysis from the Government's Smart Systems and Flexibility Plan (2021) suggests that use of flexibility from low carbon technologies such as smart charging of electric vehicles and flexible heating systems could play a significant role in reducing peak demand.

The Building Regulations will continue to set a performance-based standard rather than mandating or banning the use of any technologies. We expect heat pumps will become the primary heating technology for new homes under the Future Homes Standard. In the 2021 uplift we set the performance standards for new buildings at a level that means most new homes are likely to be built with solar panels.

HC Deb 26 June 2023 | PQ 190169

Solar Power

Asked by: Lucas, Caroline

To ask the Secretary of State for Energy Security and Net Zero, if he will make it his policy to assess unused potential for solar energy on (a) domestic and (b) commercial roof space; if he will make an assessment of the potential implications for his policies of the report by CPRE The Countryside Charity entitled, Shout from the rooftops: delivering a common sense solar revolution, published in May 2023; what steps he is taking to increase the amount of roof space used for creating solar energy; and if he will make a statement.

Answering member: Graham Stuart | Department: Department for Energy Security and Net Zero

The Government is aiming for 70 gigawatts of solar capacity by 2035, which will require a significant increase in both ground-mount and rooftop solar. Extensive deployment of rooftop solar on domestic, industrial, and commercial property to make effective use of available surfaces is a priority. Current support includes the Smart Export Guarantee and various fiscal incentives, including business rate exemptions and tax allowances. The Government is consulting on simplifying planning for installing solar in commercial settings and on carports. The new Government/Industry Solar Taskforce will focus on further measures to unlock the potential of rooftop solar.

HC Deb 21 June 2023 | PQ 189207

Solar Power: Planning Permission

Asked by: Gibson, Peter

To ask the Secretary of State for Levelling Up, Housing and Communities, whether she has made an assessment of the potential impact of the requirement to apply for a lawful development certificate to install solar panels on the number of solar panels installed.

Answering member: Rachel Maclean | Department: Department for Levelling Up, Housing and Communities

There are existing permitted development rights which allow for installation of solar equipment on and within the curtilages of domestic and commercial premises without having to make a planning application. The rights are set out in Part 14 of the Town and Country Planning (General Permitted Development) (England) Order 2015, as amended.

There is no requirement under the regulations to seek a lawful development certificate from the local authority before installing solar panels. However, this is something that a homeowner may decide to do in order to obtain written confirmation that any such proposals are lawful for planning purposes.

HC Deb 15 June 2023 | PQ 188375

Solar Power: Manufacturing Industries

Asked by: Lord Naseby

To ask His Majesty's Government how they intend to incentivise manufacturers to build solar panels in the United Kingdom.

Answering member: Lord Callanan | Department: Department for Energy Security and Net Zero

The Solar Taskforce, launched on 25 May, will identify and take forward the actions needed to develop resilient, sustainable and innovative supply chains, to support the significant increases in deployment of solar panels needed to meet the UK's net zero and energy security goals.

The Government encourages large scale developers accessing its flagship Contracts for Difference scheme to grow the supply chain through the Supply Chain Plan process. The Government supports supply chain innovation through a range of schemes, such as the Energy Entrepreneurs Fund, and initiatives funded by UK Research and Innovation.

HL Deb 08 June 2023 | PQ HL8099

Agriculture: Land Use

Asked by: The Lord Bishop of Exeter

To ask His Majesty's Government how many acres of agricultural land which were previously being farmed were given over to solar farms in (1) 2018, (2) 2019, (3) 2020, (4) 2021, and (5) 2022.

To ask His Majesty's Government what assessment they have made of the impact on UK food security of giving over farm land to solar farms.

Answering member: Lord Benyon | Department: Department for Environment, Food and Rural Affairs

Defra has previously published statistics for the amounts of land changing use during individual years from 2013 to 14 through to 2017 to 2018. The

Department intends to provisionally publish similar figures for the three year period 2019 to 2022 using a revised methodology during June or July 2023, however, the figures are not detailed enough to provide the information requested.

The Government has made an assessment of the UK's food security as a whole. In the Agriculture Act 2020, the Government made a commitment to produce an assessment of our food security at least once every three years. The first UK Food Security Report was published in December 2021. It considers the UK's food supply sources overall, noting that domestic production and diversity of supply are both important to our food security. In general, we produce 61% of all the food we need, and 74% of food which we can grow or rear in the UK for all or part of the year, and these figures have changed little over the last 20 years.

With regards to solar farms specifically, protecting our environment, backing British farmers and delivering long-term energy security with more renewables is at the heart of HM Government's manifesto. The National Planning Policy Framework sets out clearly that local planning authorities should consider all the benefits of the best and most versatile agricultural land, when making plans or taking decisions on new development proposals. Where significant development of agricultural land is shown to be necessary, planning authorities should seek to use poorer quality land in preference to that of a higher quality. Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land. We consider that meeting energy security and climate change goals is urgent and of critical importance to the country, and that these goals can be achieved together with maintaining food security for the UK. We encourage deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement.

HL Deb 06 June 2023 | PQ HL 7992; PQ HL7993

Solar Power

Asked by: Shannon, Jim

To ask the Secretary of State for Energy Security and Net Zero, what recent steps he has taken to encourage the use of solar energy in the UK.

Answering member: Graham Stuart | Department: Department for Energy Security and Net Zero

The Government is incentivising large-scale solar through the Contracts for Difference scheme, and rooftop solar through various financial and regulatory measures. These include the Smart Export Guarantee, removal of VAT on domestic panels, tax relief and business rate exemptions. The Government is exploring low-cost finance options to support upfront costs for households

and businesses and is reviewing permitted development rights to simplify planning for commercial projects.

The Government will publish a solar deployment roadmap in 2024 and has established a taskforce to drive forward further actions needed to achieve the ambition of around a fivefold increase in solar capacity by 2035.

HC Deb 30 May 2023 | PQ 186063

Renewable Energy: Planning Permission

Asked by: Bone, Mr Peter

To ask the Secretary of State for Levelling Up, Housing and Communities, what recent assessment he has made of the impact of the planning system on on-farm renewable energy projects.

Answering member: Felicity Buchan | Department: Department for Levelling Up, Housing and Communities

National planning policy is clear that local authorities should have a positive strategy in place to promote energy from renewable and low carbon sources such as solar plants.

The Government also recognises the need to preserve our most productive farmland. The National Planning Policy Framework (NPPF) is clear that planning decisions should 'contribute to and enhance the natural and local environment' by recognising the 'benefits of the best and most versatile agricultural land'. Where significant development of agricultural land is shown to be necessary, the Framework sets out that areas of poorer quality land should be used in preference to those of a higher quality.

The Government recently consulted on proposed changes to the NPPF, which includes a change relating to food security, building on what is already in the NPPF on preserving most productive farmland. Ministers and officials are currently analysing the responses received before issuing a formal response.

HC Deb 21 April 2023 | PQ 180183

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