

SR Briefing: Potential Scottish Government Solar Strategy

Introduction

The Scottish Government, as part of the Bute House Agreement¹ with the Scottish Green Party, agreed that solar power has an important role in decarbonising heat and electricity. The Agreement states that the forthcoming Energy Strategy will set out a vision for solar's future in Scotland.

The Energy Strategy refresh is expected to take place in Autumn 2022. Prior to this, The Scottish Government is consulting with the solar sector in Scotland.

Scottish Renewables has been working closely with Solar Energy Scotland and Solar Energy UK on this process. A Solar Forum was held on April 20, 2022, with speakers from Solar Energy Scotland attending.

We have also engaged with SR solar members to identify the barriers to solar deployment in Scotland and scope potential solutions for inclusion in a Scottish solar strategy.

Below is a summary of issues. We would welcome the opportunity to discuss these in more detail with relevant Scottish Government officials.

Strategy

- 1. There should be a target of 4-6GW of solar PV in Scotland by 2030 as recommended by Solar Energy Scotland. This should be accompanied by a clear pathway setting out key steps towards this level of deployment. The breakdown of a 6GW deployment target would be: 1GW of commercial rooftop, 1.5GW for domestic rooftop and 3.5GW for utility-scale ground-mounted solar.*
- 2. A clear path for solar thermal deployment in Scotland is also needed. This is treated as a secondary technology in the Heat in Buildings Strategy, and, as such, receives less emphasis in policy and support. The Scottish Government should include solar thermal in its solar vision in the new Energy Strategy.*

Storage

3. *The inter-seasonal storage of energy to enable peak winter demand to be balanced using underused summer capacity will be essential to decarbonizing Scotland's heat use.*
4. *Seasonal thermal storage should be part of Scotland's solar strategy, following the example of Denmark where seasonal pit heat storageⁱⁱ is used to store sunlight in summer for heating purposes in winter.*
5. *Distribution Network Operators should facilitate hybrid co-located solar and battery storage systems (BESS) for their role in improving the dispatchability of solar generation, especially as the economic case for BESS systems improves in the next few years.*

Grid Constraints

6. *The main barrier to utility-scale solar in Scotland is the proposed changes to the Transmission Network Use of System (TNUoS) charging regime. These changes mean that from 2025, all distribution-connected assets may be liable to pay TNUoS.*

TNUoS is a significant barrier for the deployment of renewable generation, particularly in northern UK areas. Today, the UK has one of the highest locational charges in Europe and it is one of the few countries that charges a locational element for transmission charges. This is putting UK generators, particularly in Scotland, at a disadvantage to European generators which today do not pay for using the Great Britain Transmission System.

- *Distribution connected assets will come into the TNUoS charging net which will add a layer of cost that they currently do not carry.*
- *The new charging "map" will tilt costs against Scotland, increasing the further north the installation is.*
- *The net effect would be to make solar and some wind unviable to develop and operate.*
- *In addition, the current approach to TNUoS charging results in highly volatile and unpredictable charges. This volatility can deter investors and increase the cost to consumers due to increased developer risk. As a short term priority, Ofgem should seek to stabilise the inputs that feed into the TNUoS charging as soon as practically possible.*

Planning & Green belt land

7. *The National Planning Framework 4 (NPF4) should support the deployment of utility-scale solar plants – recognising and supporting the opportunity for utility-scale solar plants to deliver cost-effective biodiversity enhancement and low environmental impact energy generation.*

8. *NPF4 should recognise and support the general locational requirements of solar development to be close to substations and that these are often on the periphery of settlements. Feeding into the electricity network at locations close to demand is an effective mechanism for delivering the decentralised grid distribution system essential for decarbonising our energy use. The NPF4 should recognise this particularly on the edge of settlements which have green belt designations.*
9. *Large areas of land suitable for solar deployment are covered by Scotland's 11 green belt designations. Several straddle local authority boundaries and at present, local authorities are taking different approaches, making national clarity important. This hinders solar deployment as many developers see the lack of consistency around green belts as a planning risk, particularly where neighbouring local authorities take opposing approaches. The draft NPF4 requires greater clarity in planning policy at national level for decision-makers at all levels to afford solar energy developments much more significant weight in the planning balance to reflect the need to ensure solar developments recognise the dual crisis of the climate emergency and loss of nature.*
10. *Scottish Renewables supports Solar Energy UK's calls for explicit language to be present within the NPF4 which supports solar developments in green belts as low-impact, biodiversity complementing technologies.*
11. *The Scottish Government should raise the threshold on permitted development rights for solar rooftop projects. Currently, permitted development rights only extend to projects up to 50kW in size, approximately 250 sqm compared to 5,000 sqm in England. The current limit unduly constrains commercial rooftop solar projects and places Scotland at a disadvantage to England. The Scottish Government can address this by raising the limit from 50kW to 5MW.*
12. *The Scottish Government should take steps to prevent additional, potentially unnecessary, costs accruing in the pre- construction phase, which could constrain solar deployment. For example, Local Authorities requesting geophysical surveys and physical trenching works (for archaeological purposes) on solar sites prior to determination. This is a significant cost and time impediment at pre-determination stage and one which could ultimately prove unnecessary if the project is not consented. Such requirements should be made conditions of planning that apply post-consent.*

Business Rates

13. *We recommend The Scottish Government raises the threshold on business rates exemptions, as these are limiting the size of many rooftop PV systems to 50kW. The exemption threshold should rise to 50MW to enable deployment driven by the considerable commercial sector and public sector interest in larger installations.*

Building Standards

14. *Solar PV installation for the domestic sector needs to be considered equally in building regulations. For example, the December 2022 building regulations state that for a heat pump notional building specification, there is no need for onsite generation, yet the gas or heat network specifications have solar PV included in the design. This discrepancy would mean that building developers are likely to choose to build to the heat pump notional building specifications. This would result in a 1.5GW deployment target for domestic installation of solar being difficult to achieve.*
15. *We recommend a technology-neutral approach should be taken by The Scottish Government to ensure that specific forms of low-carbon heat are not emphasized over others. Alternatively, The Scottish Government could modify the heat pump notional building specification to include solar PV in the energy calculation.*

Infrastructure

16. *Scotland's travel infrastructure must incorporate renewable energy generation to support low emissions and electric vehicles, for example solar panels on public buildings and car park roofs.*

ⁱ Scottish Government and Scottish Green Party - Shared Policy Programme. September 2021

ⁱⁱ <https://solarthermalworld.org/news/seasonal-pit-heat-storage-cost-benchmark-30-eurm3/>