

Briefing for the Citizen Participation and Public Petitions Committee on PE2157: Update planning advice for energy storage issues and ensure that it includes clear guidance for the location of battery energy storage systems near residences and communities, lodged by Ben Morse on behalf of Cockenzie and Port Seton Community Council

Brief overview of issues raised by the petition

Battery energy storage systems (BESSs) use batteries, for example lithium-ion batteries, to store electricity at times when supply is higher than demand. BESS are generally considered to be grid-scale systems, [often over 100MW in capacity](#), which can release electricity when it is needed. BESSs are therefore [considered important for “the replacement of fossil fuels with renewable energy”](#). To support [legally binding greenhouse gas emissions reduction targets](#), the UK Government has set the aim of achieving [clean power by 2030](#). This means “being on track to achieving at least 95% of low carbon generation by 2030”.

Renewables, such as wind and solar power, rely on the weather to generate electricity. This means that they cannot adjust to demand from consumers as easily as fossil fuels, or provide baseload like nuclear power. Therefore a decarbonised power system will need to be [supported by technologies that can respond to fluctuations in supply and demand](#), including BESS. The UK Government’s [Clean Power Action Plan](#) stated that it expected 23–27 GW of battery storage to be needed by 2030 to support clean power, up from 4.5 GW in 2024.

Although safety incidents for BESSs are rare, a common concern is the [potential fire risk of lithium-ion batteries](#). Lithium-ion batteries can catch fire because of a process called “thermal runaway”. It can occur, for example, if part of a battery is damaged. Understanding of thermal runaway has improved in recent years, leading to more flame-resistant batteries. BESS sites can be also [designed with safety features, such as fire suppression systems](#).

There is no reliable, publicly accessible record of the number of BESS fires that have occurred in the UK or elsewhere. Two documented incidents of a BESS fire in the UK include: [a fire at a BESS site in Liverpool in September 2020](#) and a [fire at a BESS project under construction in Essex in February 2025](#). The Scottish Fire and Rescue Service is not a statutory consultee as part of the planning process for BESS, and [states](#):

A bespoke working group within the Scottish Fire and Rescue Service will continue to monitor the increasing applications and development of

Battery Energy Storage Systems, as well as the Service's involvement in the planning, consultation and development of these sites.

The Scottish Government consulted on a [Draft Energy Strategy and Just Transition Plan](#) in early 2023, however a final strategy has yet to be published. The Draft Strategy sets out broad support for the technology, notes the “need to significantly increase” existing capacity, and calls on the UK Government to make changes to market regulation.

[NPF4 Policy 11](#)(Energy) includes BESS and states that potential impacts on communities, nature and other receptors will be important considerations in the decision-making process. Policy 11 requires that project design and mitigation demonstrate how impacts on communities and individual dwellings, including residential amenity, visual impact, and cumulative impacts will be addressed.

At present, there is nearly [0.5GW of operating BESS capacity in Scotland, with a further 1.6GW under construction and 19GW in the development pipeline](#).

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19 June 2025

The purpose of this briefing is to provide a brief overview of issues raised by the petition. SPICe research specialists are not able to discuss the content of petition briefings with petitioners or other members of the public. However, if you have any comments on any petition briefing you can email us at spice@parliament.scot

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