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Environmental considerations

BESS and LAES

The BESS and LAES are separate but complementary parts of Highview's Hunterston proposals. Because they would be located on the same wider site, the detailed design and emergency plans will consider how the two facilities interact. This will include appropriate separation distances, detection and automated shutdown procedures to shut down the LAES equipment if required.

An Emergency Response Plan will be developed in consultation with the Scottish Fire and Rescue Service before the facility becomes operational. This will help ensure clear procedures are in place to protect staff, emergency responders, the wider site and the surrounding community.

BESS End of Life Disposal

At the end of the BESS project life or for repowering during the project's life, battery cells need to be transported to an approved battery treatment operator or an approved exporter for treatment. This is normally done via the Original Equipment Supplier. As the market is still relatively new for utility-scale BESS projects, Original Equipment Suppliers are only now decommissioning their first utility scale projects. These initial projects have proven the capability to deliver a sustainable end-of-life solution for these assets. Original Equipment Suppliers are currently developing new recycling facilities and it is almost certain that by the time that Highview's BESS project will be decommissioned that there will be a number of recycling options available in the market.

Fire Safety and Risk Management

Safety will be a key priority in the design, construction and operation of the proposed BESS at Hunterston. Like other energy infrastructure, BESS facilities are designed to manage potential hazards, including overheating, fire and the release of gases in the unlikely event of a serious malfunction.

The BESS will include multiple layers of protection. These will include continuous monitoring of battery temperature, voltage and other operating conditions; early smoke and gas detection; automatic shutdown and isolation systems; and fire detection and suppression equipment within battery units. The layout will also include appropriate separation between equipment to reduce the risk of fire spreading within the site or beyond it. These measures reflect the type of risk controls identified in the outline safety management material for BESS developments.

The selected BESS technology will be supported by detailed fire safety information. The industry has conducted independent large-scale fire testing of complete BESS container units and has demonstrated that when thermal runaway was deliberately initiated in one battery unit, it did not spread to other neighbouring BESS units, and no explosion hazards were observed.

Major Accident Risk

As part of the Environmental Impact Assessment, Highview will consider the potential environmental effects that could arise from a major accident or emergency incident, however unlikely. This will include looking at the BESS alongside the proposed LAES facility, so that the assessment considers how the different parts of the wider Hunterston site could interact.

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