

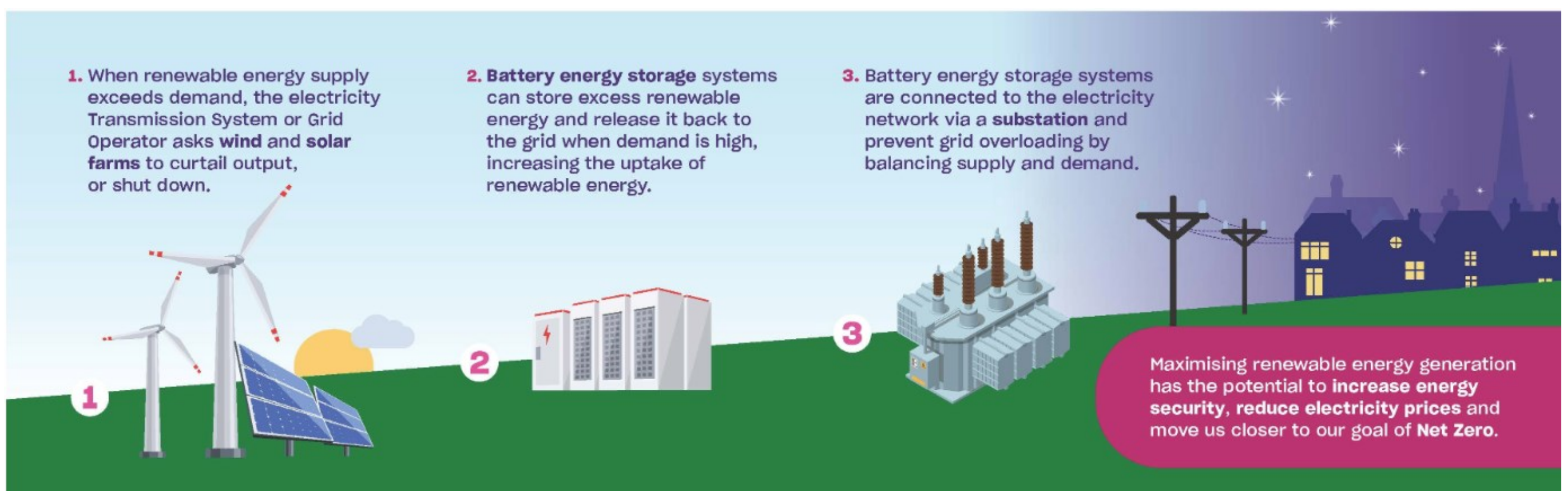
Battery Storage

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The Proposed Development includes provision for the installation of up to 5MW of onsite Battery Storage at Ballach Wind Farm. The onsite battery storage would be located adjacent to the site access track, with the batteries located in a single containerised unit, within the area of land initially used for the site construction compound.

Why BESS?

Battery storage enhances the reliability and efficiency of wind farms. By storing energy when the wind is strong and releasing it when the wind is calm, battery storage ensures a consistent and predictable power supply. This also reduces the need to curtail wind power during periods of high generation, improving the overall efficiency of the wind farm.



Source: <https://www.energiagroup.com/renewables/battery-storage-development/fieldstown-battery-storage>

Health, Safety and Mitigation

The installation of BESS systems both in the UK and around the globe is increasing to help store renewable energy.

To ensure compliance with health and safety measures, a comprehensive risk management strategy will be adopted in agreement with the Fire and Rescue Service via the National Fire Chiefs Council, as well as Highland Council planning department.

Matters addressed will include the following based on current best practice guidance as issued by the National Fire Chiefs Council (November 2022):

- **Detection and monitoring**—An effective and appropriate method of early detection of a fault within the batteries would be in place, with immediate disconnection of the affected battery/batteries. This could be achieved automatically through the provision of an effective Battery Management System
- **Suppression systems** - Suitable fixed suppression systems would be installed in the unit in order to help prevent fire and propagation between modules.
- **Deflagration Prevention and Venting**
BESS containers would be fitted with deflagration venting and explosion protection appropriate to the hazard to allow the fire to extinguish within the container.
- **Site access** - Roads capable of accommodating fire service vehicles in all weather conditions.
- **Water Supplies**—proposals for water supplies on site would be developed following liaison with the local fire and rescue service taking into account the likely flow rates required.
- **Signage**—Signage should be installed in a suitable and visible location on the outside of BESS units identifying the presence of a BESS system
- **Emergency Plans** - develop emergency plans and share these with the Fire and Rescue Service.
- **Environmental Protection Measures**—This would include systems for containing and managing water runoff.