

## Western Isles Hydrogen Energy Strategy and Energy Audit

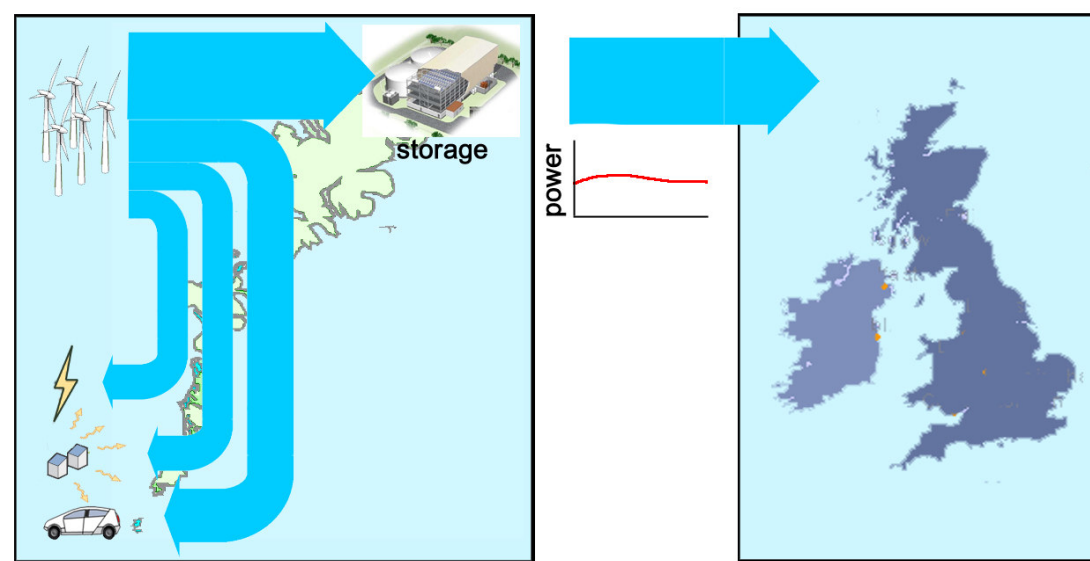
**client:** Western Isles Council.

**client brief:** To develop a roadmap for the deployment for hydrogen and related technologies within the western isles.

**our solution:** Techno-economic analysis of wind power combined with hydrogen storage and site-wide infrastructure. Business planning and strategy formation to develop roadmap for deployment.

**description:** The Western Isles has the potential to export many GW's of renewable energy, having some of the best wind resource available globally. However, the existing transmission infrastructure is not sufficient for the extra capacity and new investment is required to convey this energy to market.

Element Energy was engaged to assess the potential of novel energy systems for energy export, with the aim of maximising the islands potential for developing renewable energy and retain value from these developments. A number of suitable hydrogen schemes for deployment on the islands were identified and a strategy suggested for the development of a hydrogen infrastructure.



*Large-scale hydrogen storage and infrastructure smooths the energy output, reducing the intermittency often associated with wind power.*