

Isles of Scilly and Smart Energy Islands project update: July 2018

Addressing Energy's Changing Landscape

The energy sector is going through a technological and regulatory transformation as electricity becomes an increasingly dispersed and flexible form of energy. Hitachi believes that Social Innovation is key to optimising energy flows and ensuring a more reliable and sustainable world for generations to come.

On the Isles of Scilly in the far south-west of the United Kingdom, the Hitachi-led Smart Energy Islands project (part-funded by the European Regional Development Fund) is taking advantage of huge technological opportunities and changes in the electricity market, on a scale not seen since the late-19th century. Working with two of the UK's leading smart home technology companies, PassivSystems and Moixa, Hitachi is installing its IoT platform to balance electricity demand and supply on some of the UK's most protected yet carbon-intensive islands.

The £10.8 million project is demonstrating how solar power, batteries, smart heating technologies and electric vehicles can be used to help support the islands' energy system and reduce bills for the whole community. Hitachi seeks to contribute to the smart energy infrastructure of the future, based on an integration of information technologies, commercial innovation and smart energy systems to offer the prospect of lower costs from cleaner energy.

This summer, around 450kW of solar panels are being installed on the roofs of Council homes, on a fire station, the recycling facility and desalination plant, and in a solar garden by the airport, which is subject to planning consent. They will more than double the islands' renewable capacity and save nearly 900 tonnes of CO2 every year. One hundred homes (10% of all homes on the islands) are getting home energy management systems, and 10 homes are piloting a variety of additional smart energy technologies, including smart batteries and air source heat pumps. The technology integration, which will be completed by November 2018, is enabling the more efficient use of locally-produced energy on the islands.

A not-for-profit Community Interest Company, called the Isles of Scilly Community Venture will sell power generated by the solar panels and recycle the income to reduce electricity bills for all islanders through a special Isles of Scilly energy tariff that will be launched this summer.

Delivered as part of the Isles of Scilly's ambitious Smart Islands Programme, local partners – the Council of the Isles of Scilly, the Duchy of Cornwall, Tresco and the Islands' Partnership – are all collaborating to help residents and businesses move to a lower-carbon economy and demonstrating that social innovation can be driven from even the smallest communities.

The Smart Islands Programme aims to cut electricity bills by 40% by 2025. It also aims to meet 40% of energy demand through renewables and see 40% of vehicles be electric or low-carbon by 2025. It is designed to transform the lives of the 2,200 islanders and pilot systems that can be replicated worldwide.

Notes

1. The Isles of Scilly have no natural gas supply and rely heavily on imported fossil fuels and electricity. Electricity consumption is some of the highest in the UK.
2. The Isles of Scilly local authority area ranks 8th in England for fuel poverty. The proportion of households in the geographical area that were fuel poor in 2016 was 15.5% against the English average of 11.1% and south-west average of 10.2%. (Measured on the low income; high costs indicator, source: BEIS, Annual Fuel Poverty Statistics Report, 2018 (2016 data) <https://www.gov.uk/government/collections/fuel-poverty-statistics>).
3. The Smart Energy Islands project is the first in a series of interconnected projects delivered by the Smart Islands Partnership – the Council of the Isles of Scilly, Duchy of Cornwall, Hitachi Europe Ltd., the Islands' Partnership and Tresco Estate – which aims to achieve the goals of the Smart Islands programme.
4. The Smart Energy Islands project is receiving up to £8,637,179 of funding from the England European Regional Development Fund as part of the European Structural and Investment Funds Growth Programme 2014-2020. The Ministry for Housing, Communities and Local Government (and in London the intermediate body Greater London Authority) is the Managing Authority for European Regional Development Fund. Established by the European Union, the European Regional Development Fund helps local areas stimulate their economic development by investing in projects which will support innovation, businesses, create jobs and local community regenerations. For more information visit <https://www.gov.uk/european-growth-funding>
5. **Moixa Technology** (www.moixa.com) is the UK's leading home battery company.
6. **PassivSystems** (www.passivsystems.com) is the leading provider of domestic solar PV asset management and smart heating control services.
7. **Smart Islands Partnership** (www.smartislands.org) aims to enable the transition to a low-carbon, sustainable and resilient community on the Isles of Scilly.
8. **Isles of Scilly Community Venture** (www.ioscv.co.uk) set up to share the benefits of a range of projects being delivered by the Smart Islands programme.