



**THEME:**

Research and Innovation

**FUNDING (ERDF+MATCH):**

€6,462,927.87

**MATCH FUNDERS:**

Department of Business, Enterprise and Innovation, Ireland and the Department for the Economy, Northern Ireland

**LEAD PARTNER:**

Ulster University

**PROJECT PARTNERS**

Queens University Belfast; Ulster University; Arbarr; Dundalk Institute of Technology; University of Strathclyde and Sunamp.

**Start Date:** 01/01/2017

**End Date:** 31/12/2021



<https://www.ulster.ac.uk/spire2/the-project>



@Spire2Project

SPECIAL EU PROGRAMMES BODY

**Project Case Study: (SPIRE 2) - Demand Flexibility Map for Northern Ireland**

**SPIRE 2 is addressing how consumer-owned energy storage can resolve the problem of the variability of renewable energy (RE) output. It will explore how homes and businesses can store renewable energy effectively, allowing very high levels of RE to be integrated into power grids globally, at the same time as maximising the benefits to consumers. Learn more about the projects truly innovative work below...**

**The project has developed a Demand Flexibility map, an interactive tool designed to help develop an effective flexibility strategy and implementation pathway for Northern Ireland. The tool provides a whole energy system model, linking socio-demographic, housing, heating and transport data with known congestion and constraints on the electrical transmission and distribution systems. The tool currently has 12 map layers with over 110 sub-layers and contains features to assist with filtering and visualisation. It has various map views such as satellite, terrain and street view for a more detailed picture and geography tour. The tool is in active development and updated frequently with new features.**

**How has the tool been used?**

- To perform a geospatial assessment of flexibility needs and opportunities at neighbourhood level.
- To identify neighbourhoods at risk of being left behind in the energy transition.
- To develop a flexibility distribution and prioritisation model that gives precedence to vulnerable consumer groups to ensure that there is increased justice in the energy system.

