

2030

CORCA DHUIBHNE DINGLE PENINSULA

Dingle Peninsula 2030

Our Sustainable Future

May 2020



Background

The challenges of climate change and biodiversity loss, and the increasing importance of the United Nations **Sustainable Development Goals**, have highlighted the need for all of us to play our part in moving Ireland towards a sustainable future. This involves a major shift in how we live our lives, how we run our businesses, how we travel, how we consume and the energy we use.

The transition has already begun. We are gradually moving from fossil-fuel (coal, oil and gas) based energy to renewable alternatives (wind, solar, biomass, hydro); from petrol and diesel cars to electric vehicles (EVs) and biofuels; from private transport to public transport; from the production of single-use plastics and unnecessary waste, to the reduction, reuse and recycling of materials. We are learning to respect and preserve nature and to cut down on pollution. Most of all, we are realizing that to make the shift we need to work together in a way that respects the starting point of each sector of the community.



In order to contribute to this sustainable transition, four organisations - **Dingle Creativity and Innovation Hub**, **ESB Networks**, **North East West Kerry Development (NEWKD)**, and **MaREI**, the **SFI Centre for Energy, Climate and Marine** have joined forces on the Dingle Peninsula, in Co. Kerry. In early 2018, the ambitious multi-partner initiative, now called **Corca Dhuibhne 2030/Dingle Peninsula 2030**, was born.

Aims and Objectives



The overall aim of Dingle Peninsula 2030 is to help create a sustainable future for Corca Dhuibhne (the Dingle Peninsula).

The key objectives are to work with the local community, schools, business and farming sectors to explore, support and enable the broader societal changes required for the low carbon transition. Within this, the Dingle Creativity and Innovation Hub is also working to identify employment opportunities and to help create the conditions for a sustainable economic future for the area.

Projects

Dingle Creativity and Innovation Hub

With the support and assistance of its Dingle Peninsula 2030 partners, the Dingle Creativity and Innovation Hub has developed the following:

- The **Dingle Sustainable Energy Community (SEC)**
- An **Energy Master Plan** for the area
- A Feasibility Study for an Anaerobic Digester carried out by XD Consulting, supported by Gas Network Ireland (GNI) and Údarás na Gaeltachta through the **EU LECO** project
- In partnership with **Kerry Education and Training Board**, the training of ten local energy mentors to support people in retrofitting their homes and using energy efficiently
- A **Climate Hack** for schools

The Dingle Creativity and Innovation Hub is currently working on:

- A sustainable transport initiative with **Local Link Kerry** and **Bus Éireann**
- The setting up of a local energy Co-op, to enable the community to invest in future renewable energy generation, in association with the energy mentors, **Teagasc** and the **IFA**
- A **Farm Ambassador programme** - a pilot project to increase agricultural sustainability and productivity by supporting farmers through the digital transformation, in partnership with **Net Fessa**, **Teagasc** and **Kerry Agribusiness**
- Facilitating multi-generational, multi-sectoral engagement events and workshops including Dingle Peninsula 2030 launch, on-line Animation workshops and an on-line Re-imagine community workshop





ESB Networks Dingle Project

ESB Networks has chosen the Dingle Peninsula as the location for a highly innovative three-year project, which was launched in April 2018. The €5 million Dingle Project involves the deployment of a range of new technologies to assist in the development of a smart, resilient, low-carbon electricity network of the future, including: solar PV systems, battery management systems, air source heat pumps, electric vehicles & smart EV chargers, peer to peer energy services and smart home devices. It will also see the rollout of smart devices on the electrical network which will enable increased reliability.

To date, project activities have included:

- The appointment of 5 ESB Networks Dingle Project Ambassadors and the full energy retrofit of 3 properties. The deployment of a full suite of RE technologies is expected in 2020
- The installation of solar photovoltaic (PV) panels on 25 local homes
- The installation of 20 battery management systems in local homes under the StoreNet Project
- The testing of smart networks devices which will help increase reliability and security of supply

An electric vehicle (EV) trial, involving 17 EVs, and a peer to peer energy services trial are due to begin in 2020.

The Dingle Community is working with ESB Networks to help test these technologies and their impact on the electrical network, and also to help develop understanding of how best to activate the Energy Citizen.

Projects

North East West Kerry Development (NEWKD)

The Dingle Peninsula 2030 initiative, and the outlined projects, are driven by ecological and environmental imperatives. They require top-down expertise and investments and, above all, bottom-up agreement, support and participation. Applying **Local Agenda 21**, a global plan for environmental action, to the Dingle Peninsula, and the delivery of the **Sustainable Development Goals**, on which this entire approach is based, requires strong, active and on-going community buy-in and engagement. As the local development company based on the Peninsula, with robust local, bottom-up structures, and an inter-agency Board of Directors, NEWKD is well positioned to harness community knowledge and to ensure that interventions are bespoke and that they meet with local support. NEWKD's partnership structure brings in the direct and in-kind contribution of other stakeholders, including the social partners and some statutory bodies. Moreover, through mechanisms such as **LEADER**, NEWKD can also make tangible contributions.

NEWKD, Dr. Brendan O'Keefe and MaREI have undertaken the development of a socio-economic profile of the Dingle Peninsula to identify the social, environmental and economic challenges facing communities and to assist in planning and addressing their future needs, while also developing an evidenced-based plan for the sustainable development of the area. Over 2019/2020, a series of local community information and consultation meetings was held on the Peninsula to look at how best to enable communities to grow and develop in a way that is economically feasible, socially progressive and ecologically sustainable. Participants were also asked to envision a low carbon future for the area and to explore the changes that need to be made to the energy system. Follow up meetings are to be held with the communities in 2020.

Community Engagement Events

The Dingle Peninsula 2030 team has an active presence at the many festivals and public events that take place annually across the region and members engage with schools, community groups and local media. Work is on-going with the local secondary schools, including the series of Climate Hacks. A major programme called 'Activating the Energy Citizen', focusing on engagement, education and outreach activities, has received very welcome funding from the **Science Foundation Ireland (SFI) Discover Call**.

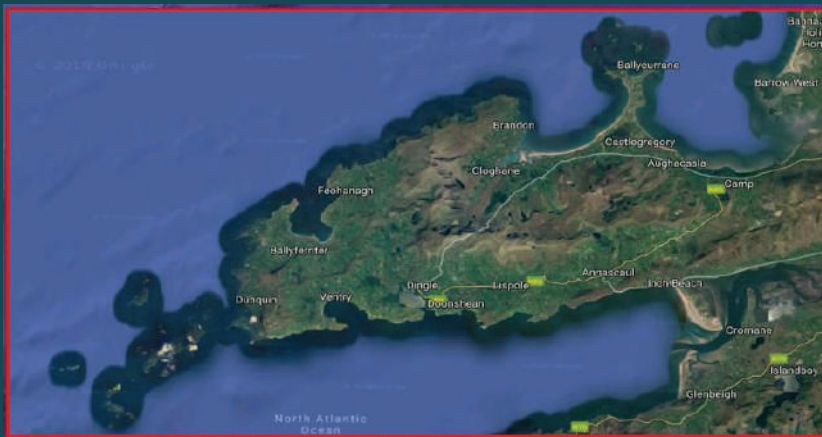


Projects

MaREI - Engaged Research on Climate Action

A group of researchers from the SFI MaREI Centre at UCC is undertaking engaged research, offering guidance and support, exploring the interaction between top-down and bottom-up stakeholder groups, and identifying ways of collaboratively forming visions for the future energy system. The team includes a community engagement specialist and two PhD researchers undertaking engaged research on the technical, social and economic elements of the transition, as well as the multi-stakeholder collaboration. MaREI has led a number of key initiatives:

- Determining an energy balance for the peninsula and associated CO₂ emissions, which formed the basis for the Dingle Peninsula 2030 Energy Master Plan
- Organising a 'Climate Hack' that was run in the secondary schools across the peninsula as part of Science Week 2019, seeking student perspectives on climate action
- Developing a number of future scenarios for the transition of the energy system to a low carbon future, informed by the community meetings held in collaboration with NEWKD and Dr. Breandán O'Keefe
- Developing the Dingle Peninsula 2030 stakeholder group and facilitation of regular meetings
- Undertaking stakeholder mapping of organisations on and off the peninsula that are associated with the energy transition
- Monitoring and evaluating the transition process emerging from the ESB Networks Dingle Project Ambassadors programme and other Dingle Peninsula 2030 initiatives



MaREI is documenting and evaluating the lessons learned from the Dingle Peninsula 2030 initiative in journal papers, learning briefs, and in a case study which will be made publically available with a view to informing future engagement between public bodies and communities and to inform wider climate action and climate action policy.

MaREI - Impacts of EVs, heat pumps and solar PV on the electricity network

MaREI researchers are also collaborating with **ESB Networks** and the **Electric Power Research Institute (EPRI)** on medium voltage and low voltage electricity network modelling of the Dingle Peninsula. This research forms part of a larger **CRENCE** project funded by the **US-Ireland partnership programme** involving researchers in the US, Ireland and Northern Ireland. The research on Dingle uses big data approaches to develop advanced computer models of large-scale electricity distribution networks. An automated procedure is being developed which will create detailed medium and low voltage electricity network models directly from Geographic Information Systems (GIS) and ESB Networks' database. This will enable faster and more accurate analysis of smart distribution networks with electric vehicles, heat pumps, local renewable generation and batteries. It is expected that this research, developed using the Dingle Peninsula electricity network as a case study, will be used to inform best practices for future network planning and operation across Ireland.