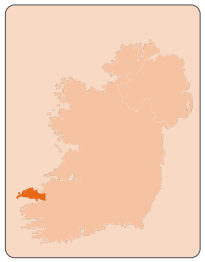
West Kerry / Corca Dhuibhne / Dingle Peninsula



West Kerry / Corca Dhuibhne / The Dingle Peninsula
is defined by the territory to the west of a line connecting Blennerville to Castlemaine and with an area of 583 sq. km and extending 48 km into the Atlantic.

- It has a resident population of 12,958, with 1,650 living in Dingle Town (*CSO, Census, 2022*) but sees visitors in excess of 1M annually.
- Second (or holiday) homes account for c. 26% of all houses on the Peninsula and tourism accounts for c. 30% of the local economy. Much of tourism product is low value.
- Farm-to-fork is underdeveloped. Much of agriculture product is not retained locally.

Corca Dhuibhne – Energy Master Plan and Demographic and Socio-Economic Profile data to support transition

- Total total energy use is 310 GWh and related CO2 emissions is 171 ktonnes. This accounts for half of the total emissions on the peninsula.
- 54% of energy use relates to Transport
  - 28% travel outside the Peninsula for work
  - Majority in favour of using public transport or electric or hybrid vehicles. More reticent about gas powered vehicles.
- **49% of CO2 emissions relate to agriculture**
  - **15% Farm / Agri related workers here vs 5% nationally**
- Largest employment category is "Other" at 26% - this includes pluriactivity
- Over 80% agree that the Peninsula should develop it's own sources of energy
- 46% of the housing stock dates to before 1980
  - Nearly 60% are favourably disposed to heat-pumps

The West Kerry Dairy Farmer's Sustainable Energy Community emerged from involvement in local innovation initiatives

ESB Networks Dingle Project

- One of five ambassadors for the ESB Networks Dingle project to trial Solar PV system; Residential-scale battery; Air Source Heat Pump; Electric Vehicle and Smart EV charger; Home Energy Monitoring System.

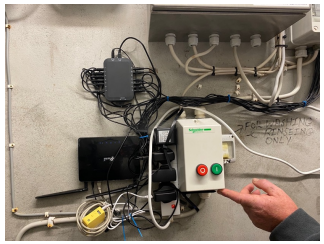
KETB / SEAI Community Energy Mentor Course

- One of 11 participants who learned about energy efficiency, community owned energy opportunities and sustainable energy communities

West Kerry Dairy Farmers Sustainable Energy Community

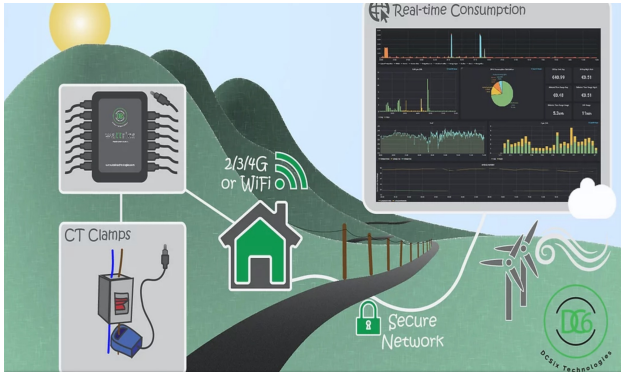
West Kerry Dairy Farmers SEC

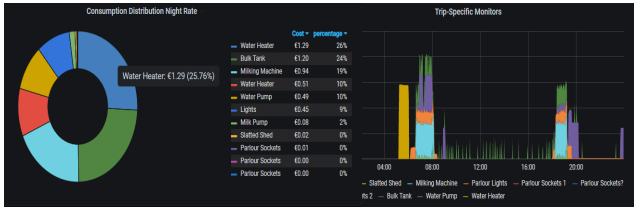
- 130 Members (100+ active)
- Steering Group established in late 2019:
  - 1 Chairperson (Farmer and Community Energy Mentor)
  - 3 Farmers
  - 2 Community Energy Mentors
  - Dingle Hub representative
  - ESB Networks representative
  - SEAI Mentor
- SEC and EMP applications developed and submitted to SEAI
- Consultants **DCSix Technologies** engaged to deliver Energy Master Plan
- **Wattrics** energy monitoring system installed on 9 farms



Energy Master plan: Key Findings

- In 2019, this farming community used energy of over 10,000 MWh (generating 2,900 tonnes of CO2) and costing circa €1 million
- Agricultural diesel is the single biggest energy consumer (52%) and costing circa €750,000. If biomethane could be substituted for diesel, there is a substantial market opportunity.
- Technology such as PV panels will reduce energy costs where the meter between the dairy parlour and the domestic dwelling is shared.
- Retrofitting of farm dwelling houses to B2 could reduce energy usage by 1,400 MWh and 360 tonnes of CO2.
- Opportunities to make simple operational changes and make instant savings i.e scraper frequency, improve insulation on pipework,





Roadmap and Next steps

Project	Target Number of Deployments	TED Reduction (MWh)	CO_2 emissions savings (t CO2)
Dwelling House Retrofit	94	1,388	357
Heat Recovery	120	229	68
VSD Pump	98	118	35
LED Lighting	86	86	25
Micro Gen Solar PV	65	338	98
Micro Hydro	1	20	6.000
AD Plant & Biogas Tractors	130	5,323	1,405

Next Steps:

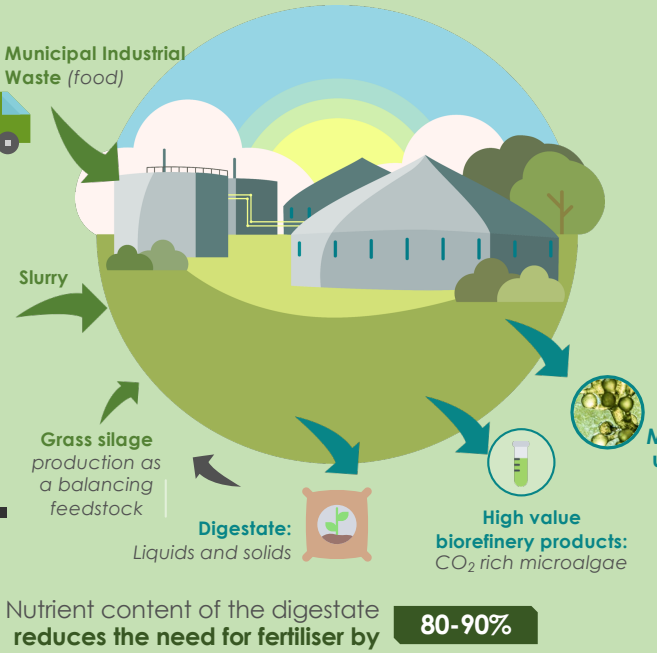
Solar PV audits to be carried out on 80+ farms to determine orientation and suitability of roofs and to match generation requirements with demand. These audits will also determine opportunities for head exchange technology deployment.

Anaerobic Digestion Pathway for cooperative community investment in secure, local, affordable and sustainable energy

KEY ENABLER — **Pillar for local circular economy:** short food supply chains (offal)

KEY ENABLER — **Immediate emissions reduction** through improved management

KEY ENABLER — **Support economic viability of small farms** with long-term contracts for production



Nutrient content of the digestate **reduces the need for fertiliser by** **80-90%**

Biomethane use in transport vehicles provides HIGHEST CARBON REDUCTION of all renewable fuels

CHALLENGES

- Need **to develop sustainable** transport using **locally produced fuel**
  - Forecourt refuelling
  - Duel fuel vehicle conversion
- Need **Renewable Transport Fuel Obligation scheme involvement** to support financial viability
- **Enabling** community investment

DINGLE PENINSULA ENERGY MASTERPLAN

54% of energy use is on transport

49% of emissions are from agriculture

POTENTIAL MARKET: Transport fuel

Public transport: buses

Agri: tractors / contract machinery

Marine: tour & fishing boats

Commercial: van and truck fleets

KEY ENABLER

Replaces fossil fuels with green energy

Go raibh maith agaibh

Thank you