

2030

CORCA DHUIBHNE DINGLE PENINSULA

LED Bulb Swaps

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Background

The idea for the 'LED bulb swap' came from our involvement in a LECO Study tour to the Rhein-Hünseruck District in Germany, hosted by the Renewable Energies Agency in November 2018. Since early 2012, the district has produced significantly more renewable electricity than its total electricity demand, an important milestone on the path to a 100% renewable energy system.

The purpose of the trip was to see how the region is transforming the €290 million previously spent on energy imports into regional value added and local jobs. The area of Neuerkirch had some particularly good examples of how profits from the export of electricity could benefit the community. They purchased a community bus that operates a taxi service and looks after the senior citizens. In addition, when the heat network was being developed, 300Mb fibre internet was installed into every house.

87 of the 105 houses in the area had all their light-bulbs replaced with LED bulbs, which resulted in a total of 1,452 light bulbs being replaced completely free of charge. The cost to replace them was €6,300 but the energy cost saving per year was €8,300. In all, across the 40 communities within the Rhein-Hünseruck District, 14,000 bulbs from 1,100 households were exchanged free of charge.



Aims and Objectives

The overall aim of the event was to begin a discussion on energy usage in people's homes. By demonstrating how something as simple as changing to LED bulbs can significantly decrease the amount of electricity used in lighting people see that small actions do add up.

The key objectives include the following:

- Inform people of the options available for improving the energy efficiency and comfort of their homes
- Launch the Credit Union's 'Green Loan', with special low rates for the financing of home improvements to upgrade the energy efficiency of the home
- Highlight the ongoing work of the Dingle Peninsula Sustainable Energy Community (SEC)
- Prompt people to fill in a household energy use survey as part of the development of an Energy Master Plan for the area

How It Worked

On Thursday, 10th April 2019, over a period of two hours, the event was held in Pobalscoil Chorca Dhuibhne (Dingle Peninsula Community School). Garvey's Supervalu, Dingle, arranged for the donation of eight hundred bulbs from Powerline. People were asked to bring their old incandescent bulbs and to exchange them for new LEDs, free of charge. A limit of four bulbs per person was set, and people were encouraged to fill in a survey when swapping the bulbs. The purpose of the survey was to gather data on residential energy usage, and associated costs, for comparison with an estimate that was being generated as part of the Energy Master Plan.

Lessons Learnt



- People are generally interested in ways to improve the energy efficiency of their homes but are unable or unwilling to make the significant investment that may be required for a retrofit
- Careful bulb selection - out of the seven LED bulbs available for swap only three had bayonet fittings, but these were by far the most popular choice. In addition, the lumens (brightness) of the bulbs being given out were much higher than necessary
- Keep surveys simple – The survey was far too long and complicated; for instance, people did not know details like the width of insulation in their roof or walls
- The event is easy to organise and can be repeated, once a supply of free LED bulbs is available

Outcome

- Raised awareness about how a simple change like installing LED bulbs can reduce people's energy usage and the CO₂ emissions from their homes
- 300 bulbs were given out, which will result in an estimated saving of 13.8 tonnes of CO₂ within the first year - the equivalent of taking five cars off the road - and an energy saving of 15,300 kWh per year, amounting to a cost saving of €2,600 per year



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