

2030

CORCA DHUIBHNE
DINGLE PENINSULA

ESBN Networks' Dingle Project Ambassador Programme

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Introduction

To better understand the challenges faced by individuals, households and businesses in transitioning away from solid fuels, the ESB Networks Dingle Project initiated their Ambassador Programme on the peninsula, whereby local people applied to integrate new technologies into their homes and businesses, to investigate the lived experience and to share learnings from their participation in the project. ESB Networks officially launched the Ambassador Programme in December 2018 with five ambassadors selected from an open call. They consisted of four families and one family business.

The participative approach applied to the Ambassador Programme sought to facilitate active engagement with, and adoption of, low-carbon energy technologies and to learn from the experiences of those involved, and share learnings across the community.



As part of the trial three retrofits were completed, two domestic and one commercial. The deep retrofits included internal and external insulation, the installation of new doors and windows, air-source heat pumps, and ventilation systems. Two Ambassadors already had heat pumps in their homes and received replacements six months before the end of the trial. All five Ambassadors had seven solar panels installed alongside a residential scale battery. All five Ambassadors were also part of the EV Trial (outlined later in the report) receiving the use of an EV for 12 months and a smart EV charger. All five also received home energy monitoring systems. Some of the technical installations were delayed due to the impact of Covid-19.

Name	Solar PV	Air Source Heat Pump	Residential Scale Battery	EVs	Retrofit Start	Retrofit Complete
Ambassador 1	Feb-19	Oct-20	May-21	Feb-21	Oct 19	Dec 19
Ambassador 2	Feb-19	Oct-20	May-21	Feb-21	Oct 19	Dec 19
Ambassador 3	Feb-19	Jun-21	May-21	Feb-21	n/a	n/a
Ambassador 4	Feb-19	Jun-21	May-21	Feb-21	n/a	n/a
Ambassador 5	Feb-19	Dec-20	May-21	Feb-21	Oct 19	May 21

Fig.1 Dates of technological installations for Ambassadors.

Method

A research team within MaREI conducted four rounds of interviews from 2018-2021. After each round, following transcribing the recordings of interviews, the data was analysed thematically using the constant comparative analysis method to code data into themes. Once coded, categories were created around different themes where similarities and overlaps were present across different interviews. Questions for each round of interviews were informed by the previous round, with supporting insights from ESB Networks and media outreach undertaken by the Ambassadors.



Fig.2 Map showing locations of five ESB Networks Ambassadors.

All participants viewed the trial positively. Coupled with this, their experience of engaging with ESB Networks throughout the trial was positive.

“I know how lucky I am to have been picked”.

“I was saying look in ten years I will still be an Ambassador for ESB Networks if people want to come to the house I would certainly have no problem.”

For the individuals within this programme, there were clear benefits and improvements made to their homes and businesses throughout the trial.

“There is a big difference in the house without a doubt”.

“The heating, the hot water, the cosiness of the house, the PV panels everything has come good”.

The Ambassadors, throughout the three-year process, have emerged as examples of energy citizenship, becoming more versed in energy-related topics and engaging publically through media outreach and public presentations to share their experiences of participation in the trial.

“People would sort of see you as a source of info, mining you for information and understanding what your experience has been”.

“You wouldn’t believe the number of times it comes up, not a day goes by that someone doesn’t talk about it or ask about it or express an interest in it. It is a really big thing in the community. It’s bigger than you would probably think it is. People are really interested. I get asked an awful lot of in-depth questions to a point where at the beginning I could not answer them myself but now I am beginning to... I am a bit more up with what I am meant to know”.

Throughout the trial, the Ambassadors have been able to track the kWh’s generated through their solar panels. Each Ambassador has had 7 panels installed. Through tracking the generated kWh, the Ambassadors have been actively tracking how they are doing when compared with others.

Ambassador	#1	#2	#3	#4	#5	Total
Solar Production (kWh)	4,869	3,892	5,249	3,735	3,951	21,696
CO2 emissions saved	1,508	1,206	1,626	1,157	1,224	6,721

Fig. 3 Solar production in kWh with CO2 emissions saved up to August 2021.

“We won’t call it a competition but we have a WhatsApp group and I am head of the posse. It is driving them all bananas so it is gas”.

In 2019 / 2020 (blue bars on the picture below), during the summer when solar PV generation is highest (bottom half of the picture), the demand from the heat pump is lowest (top half of the picture). This means some of the electricity from the solar PV is lost to the grid. However, in 2021, the addition of EV charging during the day and installation of a battery reduced this spillage, most significantly, the impact of the battery can be seen in week 23. Active participation and the integrated and optimised operation of these technologies can assist in reducing spill.

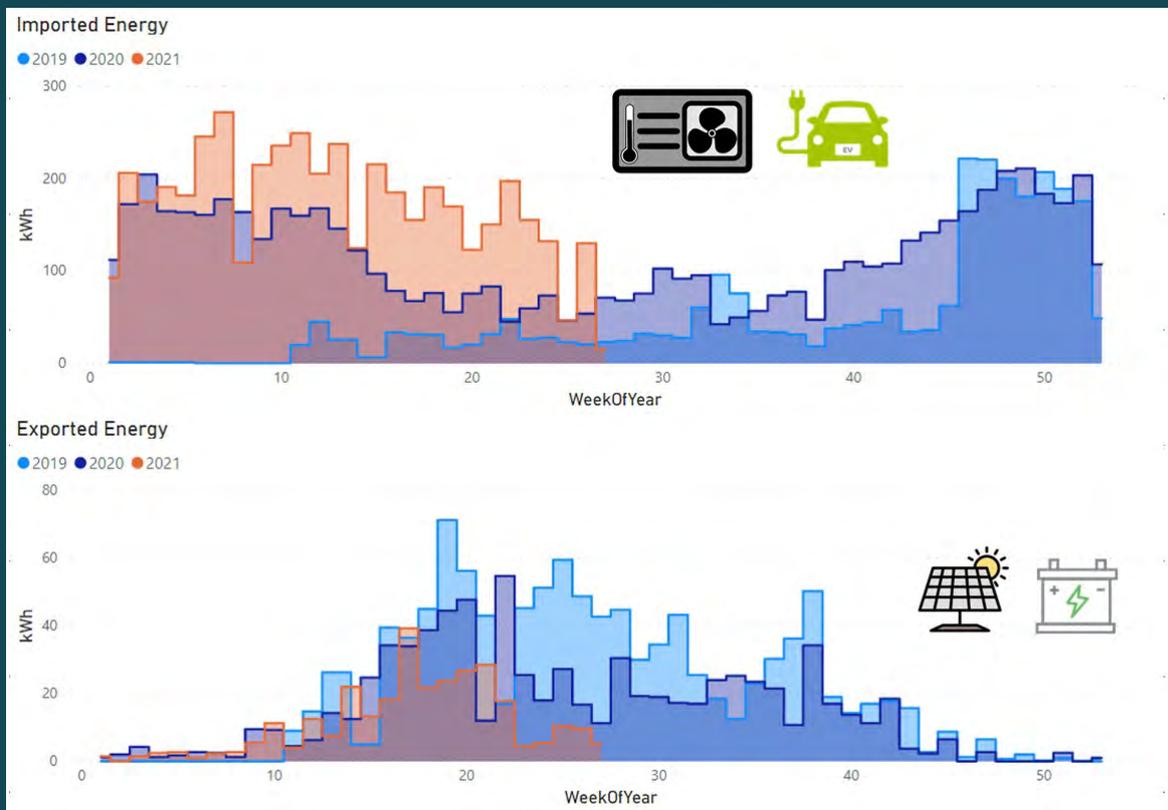


Fig. 4 Imported and exported energy for one Ambassador over the programme period.

While outlining the positive outcomes of the trial for the Ambassadors it is also important to note some of the wider challenges represented by participants throughout the study.

“But the big question anyone will want to know is it worth the cost and I can't answer that at the moment”.

And in a lot of cases I think people would struggle to make their own personal business case for it and I certainly would hope that there would be case studies and data that comes out of the ESB project would help to quantify the benefits and the payback period and things like that”.

Overall, the Ambassador Programme has successfully highlighted the potential of different low-carbon technologies to be integrated into homes and businesses. The ambassadors have taken on roles as trusted sources of information in the community with relation to energy and their experiences.



Figure 5. Illustration of the CO2 emission savings in a household with the ambassador technologies versus average Dingle Peninsula household

Learnings

- Significant emissions reductions (up to 50%) are achievable for homes, businesses and transport from retrofitting and deployment of heat pumps, solar PV and electric vehicles.
- Integrating low-carbon technologies into households and businesses facilitates the emergence of active energy citizenship.
- Active participation in demand management can be supported using interactive software programmes.

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