WEST KERRY DAIRY FARMERS

Sustainable Energy Community

AUGUST 2025

LEARNING BRIEF

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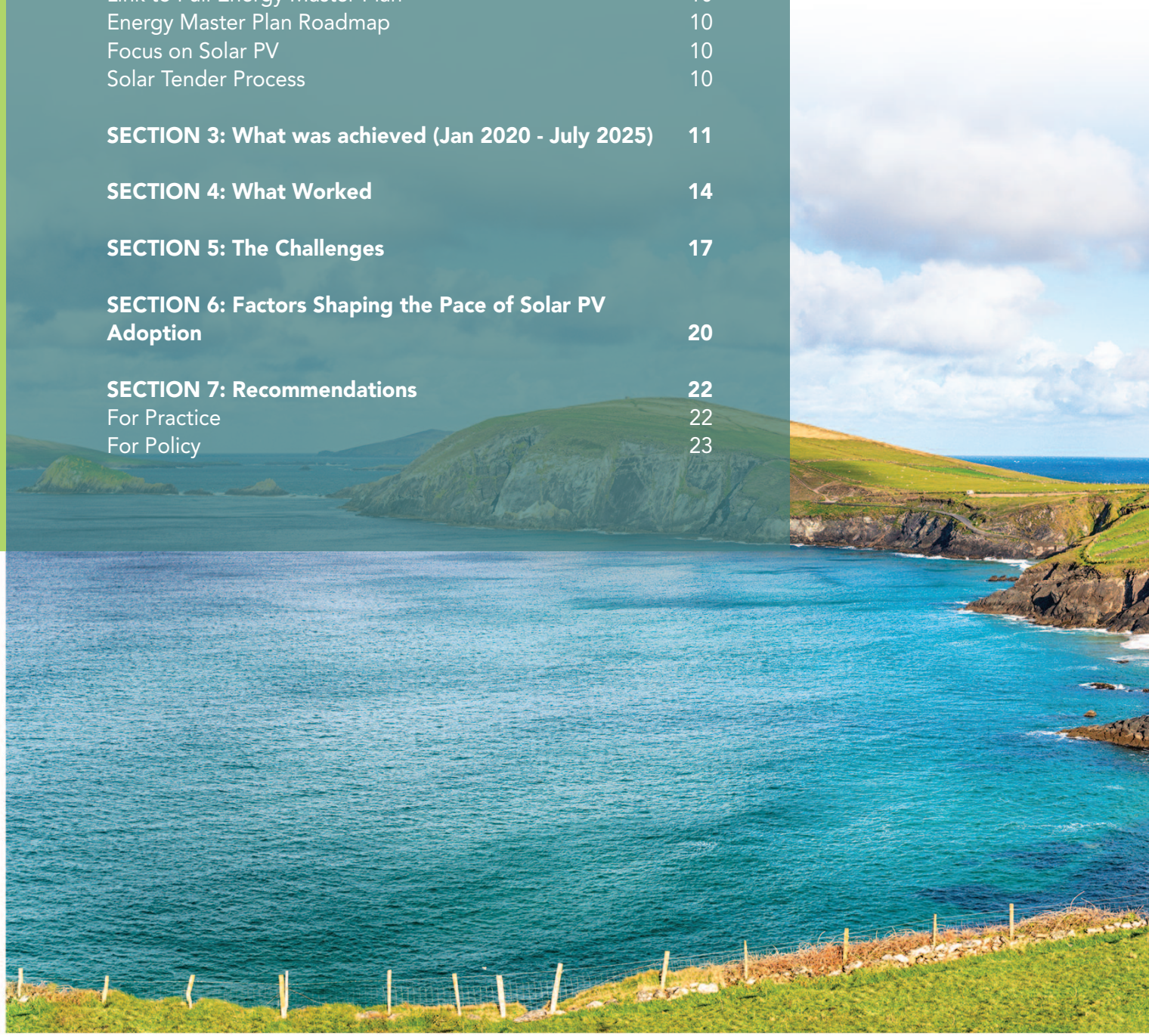
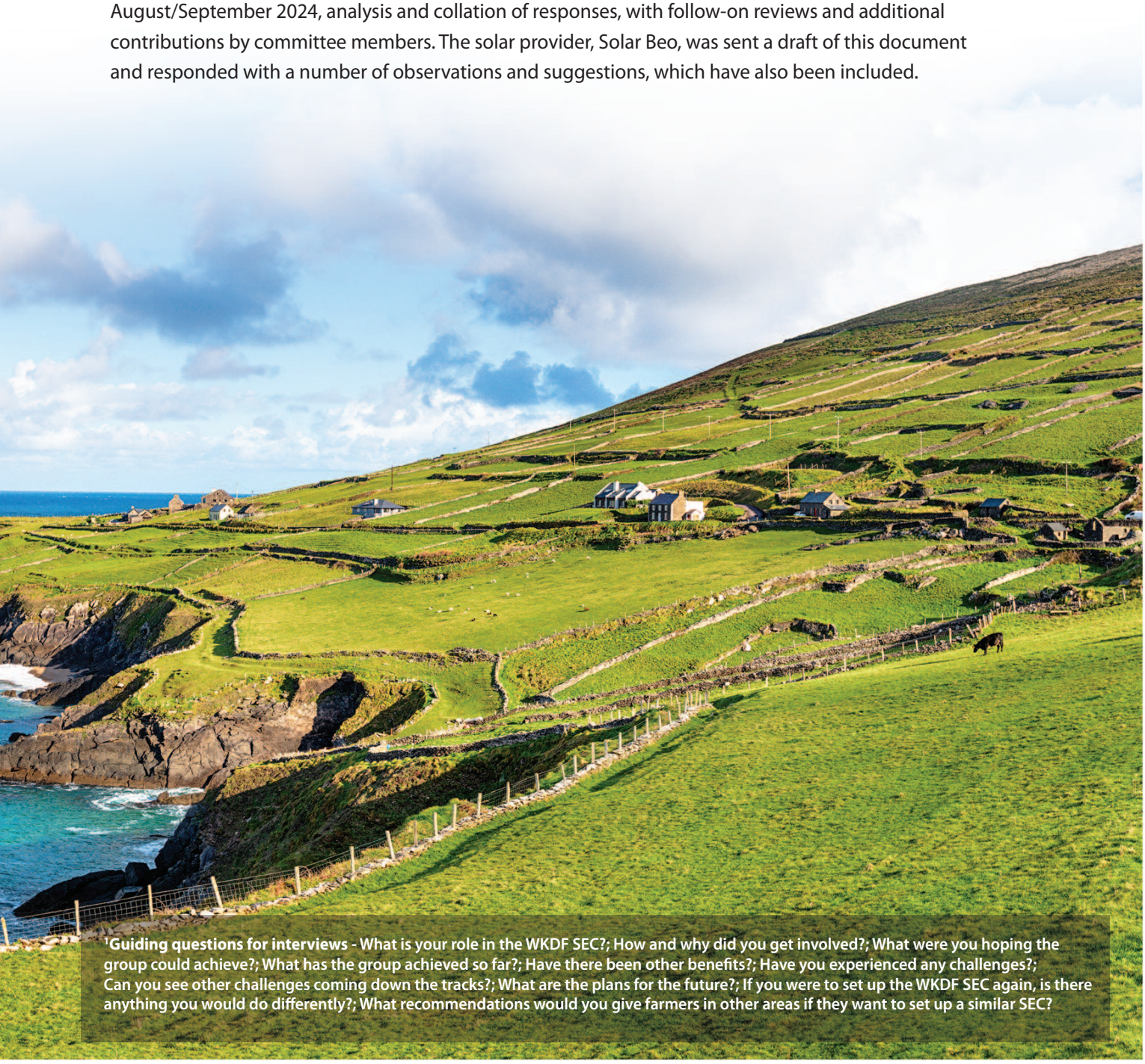


This learning brief was co-created by the steering committee of the West Kerry Dairy Farmers Sustainable Energy Community (WKDF SEC): Dinny Galvin, Michael Kelliher, Michael Dowd, Colm Murphy, Catríona Fallon, Deirdre de Bhailís, Claire McElligott and David Garner, along with energy consultant, Barry Banbury, and former SEAI SEC mentors, Séamus O'Hara and Ed O'Connor. It covers the work carried out by the group between January 2020 and July 2025.

The process was guided by Clare Watson and involved individual interviews[1] with each of the above in August/September 2024, analysis and collation of responses, with follow-on reviews and additional contributions by committee members. The solar provider, Solar Beo, was sent a draft of this document and responded with a number of observations and suggestions, which have also been included.



[1]**Guiding questions for interviews** - What is your role in the WKDF SEC?; How and why did you get involved?; What were you hoping the group could achieve?; What has the group achieved so far?; Have there been other benefits?; Have you experienced any challenges?; Can you see other challenges coming down the tracks?; What are the plans for the future?; If you were to set up the WKDF SEC again, is there anything you would do differently?; What recommendations would you give farmers in other areas if they want to set up a similar SEC?

SECTION 1 : Background

The catchment for the West Kerry Dairy Farmers Sustainable Energy Community (WKDF SEC) corresponds to the West Kerry electoral area, which goes from Dún Chaoin on the west, to Blennerville on the north and Castlemaine on the south of the Dingle Peninsula.

Farming in the catchment area includes dairy, beef, sheep, and horticulture. The bulk of the larger dairy farms are situated around Dingle town and Lispole, where the land is better suited for this kind of farming.

VISION

The WKDF SEC was envisioned and set up by local dairy farmer, Dinny (Denis) Galvin. Dinny has always had an open mind and a life-long interest in new technologies and was an early adopter of renewable energy in his home and on his farm (including heat pumps and heat recovery). In December 2018, Dinny was chosen to become an ESB Networks Ambassador as part of the ESB Networks Dingle Project. He also participated in the Community Energy Mentor course run by Kerry ETB (now Kerry College) in partnership with SEAI and Dingle Hub, which ran from November 2019 until February 2020.

Dinny took over the family farm at age 16 when his father died. Over the following 30 years he worked very hard to make the small farm viable and to provide a living for his young family. It therefore upset him to see that, when it came to climate change and sustainability, farmers were being depicted in the media as the problem. He wanted to show how they could be the solution.

The dairy sector uses far more electricity than any other farming type - milking cows, cooling milk, heating water, lighting, and running electric motors for slurry scrapers. The usage could be reduced by installing technologies such as heat exchangers, variable speed vacuum pumps and motors, and solar photovoltaic (PV) panels. As well as reducing pressure on the already burdened electricity network on the peninsula, it would also help reduce the farmers' carbon footprint.

While on the Community Energy Mentor course, Dinny came up with the idea of setting up an SEC for the 120 dairy farmers in West Kerry, focusing on reducing the electricity consumed and the associated carbon footprint.

At the time, Dinny worked as an 'AI (artificial insemination) man' with Dovea Genetics in West Kerry, so he was well known and trusted by the dairy farmers in the area and a frequent visitor to their farms. He also had their phone numbers, which meant that he was able to ring around and gauge the farmers' reaction to his idea and to get their general support. Dinny had also made a number of very good connections through his involvement in the ESB Networks Dingle Project and the Community Energy Mentor Course.

On 20th January 2020, Dinny, on behalf of the dairy farmers in West Kerry, submitted an expression of interest to SEAI to set up the SEC and he asked a range of people to join the steering committee.

At the time, Dinny sat on the Kerry Co-Op (now Kerry Dairy Ireland) Advisory Committee, alongside dairy farmers, Michael Kelliher, Michael Dowd and Colm Murphy, all representing the West Kerry electoral area, so they knew each other well. When they met up, they would talk about how to address emissions and how Ireland, for such a green country, could have such a bad reputation.

> *'We focused on dairy because they were the biggest users of electricity.'*
> **Michael K**

> *'Energy would have been Dinny's prime focus at that point and maybe not so much biodiversity, that was a journey that came alongside it. Catríona might have skilfully reminded or prompted. We had enough meetings and enough discussions to tease all of these things out. And maybe it was a case of one measure might have been suitable for energy, but would it be the right thing to do for biodiversity at the same time, or can we just stop and look at it?'*
> **Deirdre**

Just as the Community Energy Mentor Course finished, Covid-19 lockdowns began. But, with true dedication, Catríona and Séamus worked with Dinny on the SEAI application form, in an outside shed, all masked up!!

The final Community Charter was signed with SEAI in September 2020.

KEY PLAYERS

From left: Deirdre de Bhailís, David Garner, Catríona Fallon, Dinny Galvin, Michael Dowd, Claire McElligott and Michael Kelliher

WKDF SEC STEERING COMMITTEE

Dinny Galvin, Founder, Chairperson, Dairy Farmer

Dinny is based in Lispole on the southern side of the peninsula. As well as running the family dairy and sheep farm, he also worked part-time as an 'AI man' with Dovea Genetics. In December 2018, Dinny was chosen to become an ESB Networks Ambassador as part of their three-year Dingle Project. He also participated in the Community Energy Mentor course (Nov 2019-Feb 2020) run by Kerry ETB (now Kerry College) in partnership with SEAI and Dingle Hub. He is a member of the Advisory Board of Kerry Agri (now Kerry Dairy Ireland). Since May 2022, he has been working part-time as Energy and Agriculture Liaison Officer with Dingle Hub.

Catríona Fallon, Secretary

Catríona first met Dinny when they were both involved in an event linking energy and biodiversity as part of the Féile Lios Póil in 2018. Passionate about addressing climate change, Catríona had instigated a retrofit of Siamsa Tíre (Theatre and Arts Centre) in Tralee from 2016-17, where she was CEO. In the summer of 2019, both Dinny and Colm Murphy were included in a climate action residency in Siamsa Tíre with artist, Zoe O'Faoilean Green. Catríona also completed the KETB Community Energy Mentor Course and was a board member of Kerry Sustainable Energy Co-op. She offered to help Dinny filling out the SEC application form for the WKDF and he, in turn, invited her to join the committee as Secretary. Catríona was also very involved in applying to SEAI for the Energy Master Plan (EMP) grant and in the subsequent tendering process for solar PV providers. She organised and minuted Zoom meetings, set up texting and email platforms to communicate with the farmers, invoiced donors and created presentation slides for Dinny when required. Catríona was always very careful to ensure that the farmers' views were represented, not her own. She saw herself in a 'support' role.

Michael Kelliher, Treasurer, Dairy Farmer

Michael is based in Ventry, in the southwest corner of Dingle Peninsula. He has a degree in agriculture and has been a dairy farmer for many years. He was on the board of the Kerry Co-Op (now Kerry Dairy Ireland) Advisory Committee for six years. He built a new dairy parlour in 2016 and got a maximum TAMS grant for the installation of a heat recovery system. When Dinny asked him to be involved in the WKDF SEC, he said he would because it is in his nature to help where he can, and he knew there were a lot of challenges facing farmers. Michael now has a 15kWh PV system installed on his farm as part of the SEC.

Michael Dowd, Dairy Farmer

Michael is based in Tullig, near Castlegregory, on the north side of the peninsula. He is a member of the Advisory committee of Kerry Co-op (now Kerry Dairy Ireland). Michael saw his role as assisting Dinny. If there was anything he wanted to discuss, Dinny would run it by him and the other farmers on the committee. Michael's farm and house are on the same meter, which is an advantage. He installed a 10kWh PV system as part of the SEC.

Colm Murphy, Dairy Farmer

Colm is a dairy farmer in Tobar, near Lispole, on the south side of the peninsula. He has a great interest in alternative farming approaches, including growing maize trials. He has a herd of Kerry cows and supplies milk to Murphy's ice cream and is also a member of the Advisory Board of Kerry Agri (now Kerry Dairy Ireland). Colm saw his role on the steering committee as providing support for Dinny. In 2023-24, the family home was upgraded and an air to water heat pump was installed. Colm is hoping to install PV on their farm roof this year.

Deirdre de Bhailís, Dingle Hub

Deirdre has been manager of Dingle Hub since 2018 and brings this experience to the steering committee. As one of the founders of the Dingle Peninsula SEC, she was involved in developing the Energy Master Plan (EMP) for the peninsula and helped coordinate and deliver the Community Energy Mentor course that inspired the WKDF SEC. As a member of the steering group, Deirdre applied insights gained from the peninsula-wide EMP development to assist with various aspects of the project. Her involvement included supporting the initial tender process, helping to define the scope of work with energy consultants and participating in reviews of the draft EMP. Dingle Hub, under Deirdre's management, provides organisational support for local initiatives. For the West Kerry Dairy Farmers SEC, the Hub offered

resources to assist with the solar PV tender process. Additionally, Dingle Hub continues to support the implementation of the EMP recommendations by allocating staff time and event budgets. These resources help facilitate engagement with SEC members and encourage their participation in sustainable energy initiatives.

Claire McElligott - in personal capacity (2020-Dec 2021)

Claire has been working with ESB Networks for the past 19 years. She managed the roll out of ESB Networks Dingle Project Ambassador Programmes and facilitated renewable technology installation on the peninsula from mid-2018 until the end of 2021. She also worked with the community to help trial and test these renewable technologies on the electricity network and to publicise their potential across the peninsula. Claire joined the WKDF SEC steering committee, in a personal capacity, in early 2020. She attended the weekly on-line meetings, assisted in analysing the responses to the tender for energy consultants to carry out the Energy Master Plan, and supported the process of connecting with farmers. From her experience of selecting households for the ESB Networks technical trials in the area, Claire was able to contribute to the discussion around how to choose farms for audit and the need to balance the size of farms (small, medium and large) and ensure a good spread across the peninsula. Claire remained a member of the steering committee until December 2021 when she transitioned from the Dingle Project to a new role within ESB Networks, but she has continued to be a sounding board for ideas and offers her support and expertise when needed.

David Garner

David currently works developing renewable energy projects (solar and wind) for European Energy. He was a participant in the KETB Community Mentor Course, alongside Dinny and Catríona. He was asked to join the steering committee after the group was awarded the SEAI EMP grant at the end of 2020. He contributed to the tender for the EMP consultants and was very involved in the tendering process for the solar PV providers.

SEAI SEC MENTORS

Séamus O'Hara, NEWKD, SEAI SEC Mentor (2020-Feb 2022)

Séamus worked for North East West Kerry Development (NEWKD) for 15 years and retired in May 2023. He was responsible for implementing the SICAP Programme in West Kerry and, in a community worker role, had been running a family farm committee of 15 people for four years in North Kerry. The group supported109 farmers on the rural social scheme, helping them through issues like succession planning, health and safety, safe tractor driving skills for young people and first aid treatments. Therefore, Séamus had a familiarity with farming issues and, through his involvement in Transition Kerry and other environmental groups, he was seeing that farmers were an easy target for some criticism regarding their industrialised farming practices, but also that they appeared to be slow about being proactive and addressing some of the current climate change issues, including addressing national emission targets. At the time, Séamus also had a role in NEWKD as an SEAI SEC mentor for the Kerry region (sub-contracted through Ballyhoura Development) and he was asked to link with the West Kerry Dairy Farmers SEC and support them through the stages of developing an Energy Master Plan. As part of this role, Séamus brought the experiences and learning from this unique farming group back to the Southwest Regional SEC Mentor Network, which included mentors from Clare, Limerick, Kerry and Cork. Seamus' role as SEC Mentor concluded in late February 2022.

Ed O'Connor, NEWKD, SEAI SEC Mentor (March 2022-2024)

Ed is a community development worker with NEWKD and has a background in Renewable Energy and Energy Management having completed his Masters in IT Tralee. He took over the role of SEAI SEC mentor for the area when Séamus retired. At the time, DCSix Technologies were working on the Energy Master Plan. Ed was there in the background providing support and helping to preview the EMP and guide the work of DCSix. Most of his interactions were with Dinny. As with Séamus, Ed reported the experiences and learnings from the WKDF SEC directly to the South West Regional SEC Mentor Network.

DCSIX TECHNOLOGIES

Jonathan Sandham, Director, DCSix Technologies

Jonathan was the Smart Networks Manager at ESB Networks with responsibility for initiating the Dingle Project. In 2020, he left to set up his own company, DCSix Technologies, and Barry Bambury joined the team. DCSix Technologies responded to the WKDF SEC tender for energy consultants to carry out the EMP and their proposal was accepted. From the outset, they were clear that they wanted to work collaboratively, and they didn't want to come in and dictate the direction of the EMP.

Barry Bambury, Operations Manager, DCSix Technologies

Barry is from Dingle and has a background in energy, both in industry and academia. He has experience in projects that range from residential demand response to the construction of HV transmission substations.

ESTABLISHMENT OF THE SUSTAINABLE ENERGY COMMUNITY

Setting up an SEC was more onerous in 2020 than it is now. An 'SEC Charter' had to be created with the steering committee and a very complicated 'Competencies Assessment' had to be completed. Regular meetings were held, in person and online, to develop both of these. Within months of completion the system had changed, and these steps are no longer necessary. This was a positive move as it was very off-putting for those considering creating an SEC.

AIMS AND OBJECTIVES

The overall aim of the West Kerry Dairy Farmers SEC was to create a vibrant community of sustainable dairy farmers in West Kerry, and to help make the farming community resilient and energy efficient, exploiting renewable energy sources, reducing costs and carbon emissions, and becoming a template for other rural farming communities.

The group was committed to:

- Increasing their understanding of energy efficiencies and renewable energy sources on the farm.
- Building a network of farmers who will actively engage with the SEC.
- Reducing their energy usage on the farm by 3% annually from 2021.
- Working with the SEC Network, the SEAI and their Energy Mentor to make changes to their energy usage and identify projects for retrofit.
- Identifying land management practices that could assist in storing carbon.

The WKDF SEC also agreed to:

- Be inclusive and open and to share knowledge and skills with the farming community to support the transition towards a more energy efficient future.
- Engage with other farming communities nationally, leveraging knowledge transfer networks to share learnings.
- Work with other groups, agencies and farming bodies locally and nationally that can support the SEC.

FUNDING SECURED

The development of the WKDF SEC Energy Master Plan was funded by SEAI, Kerry Agribusiness, ESB Networks and Dovea Genetics, with personal funding from the four farmers on the steering committee for Wattrics devices on their farms.

An initial detailed application for funding an EMP was submitted to SEAI in August 2020, but this was revised and resubmitted in March 2021, with the amount applied for increasing to €15,000.

FUNDER	WHAT WAS FUNDED	€ AMOUNT
SEAI	**Energy Master Plan**	€15,000
SEAI	**Energy Audits**	€10,000
ESB Networks	**Additional Audits and Energy Monitoring**	€3,000
Kerry Agribusiness	**Energy Audits**	€1,500
Dovea Genetics	**General Expenditure**	€500
Dinny, Michael K, Michael D & Colm	**Wattrics Devices on their own Farms**	€4,000
TOTAL		**€34,000**

SECTION 2 : What Happened

ENERGY MASTER PLAN MILESTONES

Work began on creating contact lists and applying for EMP funding in March 2020. The final Energy Master Plan was launched on 24 August 2022.

TIMEFRAME	VENUE	WORK FOCUS
March 2020 onwards		Dinny and Catriona created lists of contacts, mobile numbers, addresses, email addresses, etc, for the dairy farmers. All mobile numbers were eventually uploaded to the texting service Text Republic, all emails were uploaded to Mail Chimp. This had to be regularly updated and then redone to some extent when the Dingle Hub took over the administration, because of GDPR. Individual consent had to be sought before a list could be circulated to Solar Beo.
March 2020-late 2021	Online (due to Covid restrictions)	Meetings were almost weekly initially, and certainly two or three per month. This was driven by Dinny, supported by SEC Mentor Seamus O'Hara, and allowed the group to: • Complete the EMP application form • Amend and resubmit the EMP application form • Draw up an RFQ (Request for Tenders) for an energy consultant to develop the EMP • Assess the submitted tenders • Appoint a consultant • Agree a timescale for EMP delivery
27 January 2021	Online (due to Covid restrictions)	A public information session to introduce the SEC and its aims and objectives to the dairy farmers of West Kerry. John Fitzgerald (ESB Networks and dairy farmer) spoke of his experiences.
10 February 2021	Online (due to Covid restrictions)	Committee meeting to score the submissions for tender as consultants for EMP. DCSix Technologies were appointed.
19 May 2021	Online (due to Covid restrictions)	Meeting with the farmers to present the energy consultants appointed to undertake the EMP (DCSix Technologies) and to launch the survey. Those who completed the survey were in with a chance to receive a free energy audit and monitoring. Over 50% of the farmers responded.
6 July 2021		Five farmers were selected from those who completed the survey to receive the complimentary energy audits and monitoring.
18 November 2021	Online (due to Covid restrictions)	DCSix Technologies gave the farmers an update on their EMP research and the next steps were outlined.
24 August 2022	Údarás building, Milltown, Dingle (in person at last!)	Public meeting to launch the EMP and present the findings to the members of the SEC and all other interested parties.

STAGES OF DEVELOPMENT OF ENERGY MASTER PLAN

STAGE 1 : Introduce the Idea to the Farmers

This involved an initial information session (online because of Covid restrictions) and the gathering of contact details. 86 dairy farmers agreed to join the SEC.

STAGE 2 : Recruit an Energy Consultant

A tender call was circulated and a selection process carried out. DCSix Technologies were officially appointed in March 2021.

STAGE 3 : Develop the Energy Baseline

The first ask, using a survey, was to go out and get information from the farmers around their fuel bills and what kinds of technologies are being used, to get a breakdown of the fuel sources and emissions and other costs associated with them, and also to get a breakdown of how many people are using ice builders, making their ice at night-time, how many have direct expansion cooling in the day, who's on night rate, who's not, how many houses are behind the same ESB meter as the farms, etc

STAGE 4 : Monitoring

DCSix Technologies developed the Wattrics device which has a clamp on each line coming out of the fuse board. It shows how much electricity the milk cooler, hot water system, milking machine is using and gives detailed information about what energy is being used at what time of the day. It's on an app on the phone and so is easily accessible.

Nine farms were monitored using the Wattrics device for the duration of the project. Five were funded from the project budget and the four farmers on the committee paid for their own units which amplified the breadth of information available to the consultants.

The device was deployed on a range of dairy farms on the peninsula (big farm, small farm, single phase, three phase, one/two meters, etc) that were using a range of different technologies (bulk tanks, ice builders, variable speed drive milk pumps and plate coolers, etc). This provided a range of measurements which were reflective of dairy farms in West Kerry.

The results were then benchmarked against typical usage, e.g., a 100-cow dairy farm was supposed to use 18,000 kilowatt hours of electricity a year.

STAGE 5 : Farm Audits

Part of the original tender document required the consultants to do in-depth, on-site audits of five farms. This was to supplement the information provided by the Wattrics device and allowed the consultants to identify other areas where the farms could improve the energy efficiency of their operations. Without this in-person visit, the technical data (from the surveys and the energy monitoring) would have only given part of the picture. The consultants looked at the following:

- Equipment and machinery
- Meter (night/day)
- Scrapers
- Efficiency and maintenance
- Lighting

LINK TO FULL ENERGY MASTER PLAN

https://dinglehub.com/wp-content/uploads/2024/11/West-Kerry-Dairy-Farmers-SEC-Energy-Master-Plan-Nov-2022.pdf

ENERGY MASTER PLAN ROADMAP

Arising from the Register of Opportunities in the EMP, DCSix Technologies identified the following potential suitable projects for the WKDF SEC. Combined, they stand to reduce the total energy demand (TED) of the community by 7,422 MWh, a reduction of over 70%.

PROJECT NUMBER OF DEPLOYMENTS	TARGET REDUCTION (MWh)	TED REDUCTION (t CO^2)	CO^2
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
AD Plant & Biogas Tractors	130	5,323	1,405

FOCUS ON SOLAR PV

While the EMP demonstrated that heat recovery was an important first step, the WKDF SEC Steering Committee decided that solar PV generation was an excellent opportunity for the dairy farmers at the time, largely because good grant options had become available both from the Department of Agriculture and SEAI. Additionally, installing solar panels is a visible action, which might help encourage others to do likewise. So, the group agreed to focus on this first.

SOLAR TENDER PROCESS

STAGE 1 : Prepare Request for Tender (RFT)

Meetings were held to define the tender brief in order to put out a call for RFTs. Dinny worked with Barry (DCSix), Deirdre and Hazel Blennerhassett (Dingle Hub) to create the brief. This took a considerable amount of time. The final RFT document was sent to 11 solar PV companies.

STAGE 2 : Review Responses

Seven companies responded. The seven proposals were then reviewed by a selection committee made up of members of the steering committee - Dinny, Catríona, Deirdre, Barry, Jonathan and David, with significant administrative help from Hazel Blennerhassett (Dingle Hub) and technical support from Fergus Sharkey (SEAI).

The seven proposals were assessed using a range of criteria including: reliability of individual manufacturers; length of guarantees for panels, inverters and batteries; costs; and level of after sales service included.

The companies were narrowed down to three.

STAGE 3 : Interviews and Scoring

Representatives of the three companies were then invited to an interview in the Dingle Hub over a period of two days. Dinny, Catríona, Jonathan Sandham, Barry Bambury, Michael Kelliher and Michael Dowd were on the interviewing panel. Deirdre also observed on the day.

All tendering companies were scored individually, and the scores were added to give a final result.

The solar PV provider, Solar Beo, based in Dingle, won the tender and they committed to providing a comprehensive after sales service and a group discount price of €900/MWh for participating farmers. On the 7 September 2023, a public meeting was held in the Údarás building in Milltown, Dingle to present the PV meitheal proposal to the members of the WKDF SEC.

https://dinglehub.com/projects/sustainability/agriculture/#:~:text=The%20group%20undertook%20an%20energy%20master%20plan%20in,the%20biggest%20agricultural%20energy%20component%20%2852%25%29%2C%20costing%20%E2%82%AC750%2C000.

SECTION 3 : What was Achieved (Jan 2020-July 2025)

A very mixed group of people were brought together to achieve something significant for the community. This also created strong links between the Dingle Hub and the farming community as well as others in the area.

- **The West Kerry Dairy Farmers SEC was established**

In 2020, there were 120 dairy farmers in West Kerry. The SEC had contact details for about 100 of these, of whom 86 signed up to be part of the SEC. They were initially put on text and e-mail lists (more recently a WhatsApp group was established) where they received information and invites to events.

> *I always said to Dinny, whatever figure we get if we get 40 committed that will do the work, I think we have a great achievement.*
> **Michael K**

- **Funding was sourced from SEAI, ESB Networks, Kerry Agribusiness and Dovea Genetics.**

- **An Energy Master Plan was completed and launched**

The EMP is an important document that provides a lot of information about the energy usage of the farming community on the Peninsula. It can be used for additional funding applications in the future (to Leader, Climate Action Fund, etc.) as well as being the basis of future meitheals for other technologies such as heat recovery units, etc.

- **A solar tender process was completed and solar provider chosen**

The tender and evaluation process involved a lot of time, skill and dedication, particularly from Catríona, Hazel, David and DCSix. It was supported by SEAI technical expertise and yielded three very high-quality suppliers that the group could partner with. One company, Solar Beo, won out based on the prices and comprehensive after installation support they offered. The process yielded very competitive pricing, €900/MWh (some quotes were as high as €1400/MWh), and it provided a very significant service to the farming community.

> *It was very hard work to bring that tender together but we're demonstrating the benefits of people coming together and their collective buying power, and that has been proven by the people who are going through the process at the moment.*
> **Deirdre**

- **Solar PV began to be installed**

Of the 86 farmers who signed up to be part of the SEC in 2020, about 60 were initially interested in installing solar PV.

As confirmed by Solar Beo on 23 July 2025, twenty farmers had installed their panels, three were waiting for NC7 approval, five were interested in going ahead in 2025 and six were undecided. These figures do not include installations carried out on farms, outside of the meitheal, by other solar providers.

SOLAR INSTALLATIONS - 23 JULY 2025

Solar PV installed	20
Waiting for NC7 approval	3
Interested in going ahead in 2025	5
Undecided	6
Total 34	

- **Knowledge was gained and shared**

The Zoom meetings with the wider group usually attracted between 30 and 40 farmers. A lot of these would not have been technically minded, so they were gaining knowledge and confidence around energy and technology, energy efficiency (everything from lights in the shed to the technology for cooling the milk), smart meters and the importance of internet connection for smart technologies.

- **A greater understanding of the importance of nature and biodiversity was developed**

While the focus was initially on energy, it then also became a journey of awareness and understanding of biodiversity.

- **The process of co-creating the Energy Master Plan with the farmers worked very well**

> *Starting off we were told to drive on with it but the more input we got from the farmers the better it was, and they really read everything we sent them. The EMP was sent around, and the core group really went through it. I know Dinny and the lads were looking over every piece of it which is good.*
> **Barry**

- **There was a social side and a bit of fun**

> *It brought us together. We had more interaction with each other.*
> **Michael Dowd**

> *We had many a debate and we had a bit of craic as well, and a bit of wit.*
> **Michael K**

- **They were ahead of the curve**

The farmers themselves had a sense that they were being proactive, getting out ahead of this by finding out what they could do. They broke the mould in SEAI by developing a sectoral SEC with a specific group of farmers.

> *The West Kerry dairy farmers are ahead of the game.*
> **Claire**

> *For once we were leading.*
> **Michael K**

> *Nationwide, they were the first. They broke a lot of barriers.*
> **Ed**

- **The EMP is a useful starting point for other dairy SECs**

The work carried out on this EMP can serve as a very useful basis for other dairy SECs - most of the recommendations will be the same so other areas can focus their efforts on the main differences. Also, an exercise to extrapolate the numbers was done to see what could be achieved if the recommendations were implemented nationally - it would mean savings of 138GWh and 47ktonnes of CO_2 annually.

- **WKDF SEC was the inspiration for the Corca Dhuibhne Tourism and Hospitality SEC**

The development of the WKDF SEC, and a visit to Geaney's Bar to see their cooling facilities, led Dinny to thinking about the importance of energy efficiency within the tourism industry.

> *I said, there's massive savings for the dairy sector. But I said, there's massive savings to be made as well from the tourism and hospitality sector.*
> **inny**

In late 2022, discussions commenced between the Dingle Hub, Fáilte Ireland and the Tourism Department of Kerry County Council to explore the development of sustainable tourism on the peninsula. The Corca Dhuibhne Tourism & Hospitality SEC was proposed to replicate the work of the dairy farmers and in March 2023 was launched by Fáilte Ireland in partnership with the Dingle Hub, Údaras na Gaeltachta and Kerry County Council.

- **It opened doors to the farming community for the Dingle Hub and other projects, especially the Corca Dhuibhne Inbhuanaithe Creative Imagining Project**

> *The benefit of having an organised group of farmers that we could come to on the creative project and tap into their insights and advice and guidance on it, the fact that they had the structure and had come together I think is huge.*
> **Deirdre**

> *You were wondering how you were going to approach farmers with a creative artist, you were wondering how we'd take to it. I said I'd be for it. Farming gets an awful bashing from a certain element of the media. All I wanted to do was show, look, all we're trying to do is earn a living, we're just doing it a bit different. And I was saying, if we did it through creative art, or whatever, we're not a bad group, over anyone else. We're just human beings just like everyone.*
> **Michael K**

Dingle Hub is now seeing how different initiatives can complement and reinforce each other and how the learning can be shared with and developed in other projects on the Dingle Peninsula and in the wider Kerry region.

- **The experience and knowledge gained was shared nationally**

Presentations were given to other farmers and community groups and to politicians and policy makers across the country, including Teagasc meetings in Tralee and Ballylongford, and an event with West Cork Dairy Co-Ops Clonakilty.

> *I've gone down to Clonakilty. I've gone to numerous renewable energy meetings. I've gone to numerous farmer meetings. I get invites all the time.*
> **Dinny**

The experience and knowledge from this unique initiative was brought back to the Southwest Regional SEC Mentor Network by Séamus and Ed, the SEC mentors.

Dingle Hub shared ideas with multiple farm co-ops including Kerry Agri, Dairygold, Carberry and Tírlán. It was hugely encouraging to see the roll-out of "FarmGen" a collaboration between Tírlán and Dairygold. It is hoped that the other co-ops will drive similar initiatives.

> *The milking machine salespeople are telling me that there has been a notable increase in applications for heat exchange grants and they believe it is linked to the information provided in the EMP.*
> **Dinny**

- **National Recognition**

> *What you see on the media or on the news is that angry farmer waving a stick, but there are a lot of them who are trying to do the right thing, who are trying to find their way, and are feeling very downtrodden. The West Kerry dairy farmers, and the acknowledgement of the work they're doing, I would hope, gives a little bit of a sense of pride and helps break down that perception that it's all negative with farmers.*
> **Deirdre**

Dinny was awarded the Best Dairy Sustainability Driver award at the 2024 National Dairy Awards for his leadership, guidance, and support to farmers in maintaining and improving their farm sustainability.

Section 4 : What Worked

• Working at a sectoral, granular level
In a sectoral SEC the link between the members is in the kind of work they carry out and how and where they use energy. The huge advantage over the broader geographically based SEC is that you have a number of businesses, farms in this case, who understand each other and who need to make the same energy changes.

> *All the farmers in the SEC, they all have the same problems that I have. It's local. we're pretty much dealing with the same things.*
> **Colm**

• Trust in Dinny's leadership
Farmers and steering committee members knew and trusted Dinny to lead the initiative. This was instrumental in their decision to get involved.

> *My responsibility is to keep everybody together and keep the whole thing going. Keep the farming community motivated, and keep the steering committee motivated as well.*
> **Dinny**

> *Dinny was the chief cook and bottle washer, and anything that's happened, Dinny was the beginning the middle and the end, we were only there for moral support.*
> **Colm**

> *He was a huge driver for the whole thing. And without somebody like that in any committee, you're in trouble, because procrastination sets in.*
> **Ed**

• Dinny's passion and drive
Without Dinny's vision, enthusiasm and determination there is no doubt that the SEC would not have been set up.

> *We all might have certain levels of interest. But Dinny has passion and drive. When he was picked as one of the ESB Networks Ambassadors, I don't think he, in his wildest dreams thought that he'd end up where he is today, but that's what that level of passion got him.*
> **Colm**

> *I suppose we were only part of the cog. I think Dinny seemed to be ten steps ahead of us, he had that interest, I wouldn't be into the things to the same degree. I want to play my part in all of this but Dinny, he'd be so keyed into it.*
> **Michael K**

• Dinny's connections
Because he was the 'AI man' with Dovea Genetics, Dinny was already known and trusted by the dairy farmers in the area. Because of his job he had been on almost every dairy farm and had built up relationships with individual farmers over the years. And he had all their phone numbers!

• Having the openness to try things
The group was prepared to learn, to experiment and to break new ground.

• Dinny picked a great steering committee
It was a really strong, vibrant committee, with a broad mix of personalities, knowledge, skills and experience and a good gender balance.

> *I selected my people very carefully, everybody that I had on that steering committee I was involved with. I was very close to them as well. I just knew what they had to give. I could always get the vibe when I'd be talking to Deirdre, Claire McElligott and I knew the couple of farmers. I chose the farmers pretty closely as well. I knew they'd be guys that would stay involved.*
> **Dinny**

• Committee members were respectful of each other
Everyone was committed and motivated and while there might have been some spirited discussions, there was never a row. People turned up, nobody took over, there was an openness to learning and everybody had something useful to contribute. Long lasting relationships were built between those involved and understanding was shared.

> *We'd all have different opinions, but we're open to each other's ideas. Once we all know what each one is thinking and what their views are, we're able to come together then and come to some agreement that will benefit us all. There's no one going on a solo trip.*
> **Michael Dowd**

> *It's been a privilege to be involved in it. I'm always very proud of saying that I am the secretary of the WKDF SEC, and I have such respect for farmers from this and the creative climate action project. I would have thought I was sympathetic to start off with but just understanding the complexity and the nuances of it all, the challenges and how hard they work.*
> **Catríona**

• The Farmers on the Steering Committee were particularly committed

> *We were really fortunate in West Kerry, not only to have Dinny there, but to have other farmers who were quite strong and courageous, to take on the baton of leadership and to see that they wanted to find out, to become involved and to see where this would take them. So, they were individuals who became a strong supporting group. I think that's quite important in the whole success of it all.*
> **Séamus**

A testament to this commitment was demonstrated when, on realising that the group only had funding to pay for five Wattrics monitoring devices for the duration of the project, and more would be beneficial, the four farmers on the committee purchased their own.

• Being patient

Patience is indeed a virtue, especially if it is coupled with a long-term vision and practical goals.

> *Getting things done can take a lot of time. We know delays cause tensions but when you see things working properly, as can be seen from the data emerging from Dinny's farm, then it's all worth it in the end. It does however require lots of patience to get to this point!*
> **Deirdre**

• Having backup support for the front runner

There was pushback from some of the farmers around delays and bureaucracy, which were outside of the group's control. Dinny became the sounding board for a lot of their frustration.

> *Dinny is taking robust feedback regularly, doing it alone would grind you down. The other farmers on the committee are very steady, very quiet, in the background always, but very, very steady. They have his back, it's really vital that that's the case.*
> **Deirdre**

• Covid-19 and zoom meetings

Covid-19 restrictions had just been imposed when the committee came together, so meetings had to be held online. Zoom worked very well, and the lockdowns meant that people enjoyed the interaction and had time for it.

> *I think, if anything, we enjoyed the Zoom meetings because you were meeting nobody, and it was very tough times on people, and people were glad to be involved.*
> **Dinny**

> *Tardiness went out of the window with Zoom, hard to make the excuse that I was stuck in traffic.*
> **Ed**

• Methods of communication with farmers

Dinny had every farmer's phone number and e-mail address in his phone or on pieces of paper. In January 2022, Catríona created spreadsheets with each farmer's contact details and then set up a texting service to keep the farmers informed of what was happening and to let them know if an e-mail had been sent to them.

> *I think that was a really important way to communicate, there'd be older farmers and younger farmers, probably more on the older side, but they'd be like me, they'll read a text.*
> **Catríona**

What'sApp subsequently became a more common platform, so a What'sApp group was set up in mid-2024.

• Building on the work already undertaken in the area as part of Dingle Peninsula 2030

Experience and capacity had already been gained by the Dingle Hub and their partners in the development of the Dingle Peninsula SEC Energy Master Plan, the ESB Networks Dingle Project Ambassador Programme and the Kerry ETB Community Energy Mentor Course. Most importantly, relationships were made between interested people.

> *Dinny and I and a few others, we'd done the Community Energy mentor course, and then a few of us started to look into whether we could do a community owned energy project and sort of ran out of steam for a variety of reasons, but we knew each other, and we had a bit of an interest in pushing forward with the community.*
> **David**

• Wider peer mentorship

Working together and sharing learning within the SEC Network has been very important.

> *It's one of the key points for the SEC, the fact that you have your peer mentorship there, and you are part of a group, other SECs are available to go to for help. Everybody's experience can be different, but we all learn from mistakes we've made and barriers we've come across, I think that that peer effort is very important.*
> **Ed**

• Using the Wattrics monitors

The monitors were very effective in demonstrating how much energy was being used, when and where.

> *One thing it shows is that a robotic dairy parlour uses three times more electricity than a standard one!*
> **Catríona**

> *It was good. Now, the last while I haven't taken much notice of it. But for the first year or two we were regularly checking it. One of the things it found was the deep freeze was consuming a good bit of power. It hadn't been defrosted in over a year, and it made a big difference when that was done. So, it just shows that there can be benefits to monitoring.*
> **Michael Dowd**

But sometimes monitors can then fall into the background.

> *It's like an exercise plan or diet. While you're on it it's very good but then I suppose you might reach a goal, and you get side-tracked, or it would go to the side a little and it needs to be brought back into the fore again. You need to be on top of it all the time. But now, if you saw a bill going up again or a usage going up, at least you'd be able to check it. You'd have a better idea of where to look.*
> **Michael Dowd**

SECTION 5 : The Challenges

- **The amount of voluntary work involved far exceeded what had been anticipated**

- **The complexity of the SEC Application form at the time**

The application process was onerous and tedious, and needed a few different heads to complete.

> *I'm pretty good to fill application forms for different things. But the SEAI application form to set up an SEC was a very complicated document. Now, that has eased up quite a pile since. There were pages in it and definitely only for Catríona and bits of guidance from Séamus and guidance from Deirdre as well, I don't think I'd have got there. I'd have tried, but I don't think I'd have got there.*
> **Dinny**

The registration process has since been simplified.

- **The solar tendering process**

Pulling together the solar tender was difficult and time consuming. It involved most members of the committee and others in the Dingle Hub and DCSix and technical support from SEAI. The tender document had to be written, and interested solar companies notified. When the tenders came in, a spreadsheet was set up to categorise the different technical aspects, their costs and guarantees. Three companies were interviewed, and one was chosen. It was a big responsibility.

> *There's no doubt about it, it hasn't been an easy process but it's the only pathway that I can see to action across the sectors.*
> **Deirdre**

- **Uncertainty about how many farmers would take up solar PV**

While pushing for a good group discount the group couldn't guarantee how many farms would actually take part.

> *We could just say, up to this amount. So that's an interesting one for the future, because it's not like you can go out for a formal tender where you've locked in - it's this many panels, this many farms. There's a bit of an ongoing process there. So, you could imagine if someone had put in a tender saying, well, I'm putting this in because you've said up to 80 farms, so you're getting a discount, and then it only goes down to whatever, 20 farms. You could have an issue with that.*
> **David**

> *A clearly defined start and end date could have helped convert more farmers earlier, mitigating the tendency to defer decision-making.*
> **Solar Beo**

- **It took time to engage and maintain communication with the farmers**

For instance:

- Getting all the information out to the farmers in the first place and then igniting their interest.
- Keeping the farmers updated, especially when it was being done verbally and one-to-one. However, this should be easier now that farmers are used to participating in WhatsApp groups.
- Getting farmers to fill in the surveys – the committee organised a couple of Zooms for the farmers explaining what was going to happen, asking them to fill in surveys, and then sharing the results.
- Because of GDPR requirements the farmers' contact details could not be passed directly to Solar Beo, so permission had to be sought from each farmer.

- **The TAMS grant**

Targeted Agriculture Modernisation Schemes (TAMS 3) is administered by the Dept of Agriculture, Food and the Marine and provides grants to farmers to build and/or improve a specified range of farm buildings and equipment on their holding. As part of this, the Solar Capital Investment Scheme encourages the purchase of solar investments. 60% of the cost of the investment is covered by the grant. The Tams grant process was a real barrier to some farmers because it can take a lot of time and it involves an on-farm inspection by a Dept of Agriculture inspector. Also, it is not possible to apply at any given time as the grant comes out in tranches - a window will open, they'll take a batch of applications in and then it closes again.

> *A couple of farmers at the moment are interested in Tams, but it's not open and they are waiting a couple of months till it kicks it back. So, they are ready to go now and then in three months' time, they're saying, I was getting on grand without it, the ESB bill has come down a bit and the motivation is gone.*
> **Barry**

While the grant aid provided is less in monetary terms, the SEAI route is simpler and more straightforward.

- **The fact that SEAI grants are retrospective**

All SEAI grants, including the EMP grant, are funded by the Department of Communications, Climate Action and Environment. Grant applications need to be made before any work begins. Once the applicant has received grant approval, they have to complete the work before the full grant is paid. This is very challenging for voluntary groups who do not have a stash of money in the bank for upfront payments to consultants or the administrative capacity to organise staged payments.

> *Obviously, you set milestones. So, you could be getting paid every time you pay 50% or whatever. You could apply for it then and get it back that way. But I think what is getting forgotten in all this is all these groups are voluntary groups.*
> **Ed**

- **The €200 upfront payment to Solar Beo for their initial survey**

To start the application process for the Tams grant, the solar provider has to carry out an on-farm survey. Solar Beo offered to do this for the farmers who were going down the Tams route but, in order to cover their costs if farmers weren't interested or installation wasn't advised, they asked for a €200 upfront payment before calling out. The money would be refunded or lodged as a deposit on the solar array if the farmer followed through with the application.

While this approach had come up as a topic during the tendering process, it was not seen as being a particular problem. But, unfortunately, it did prove to be a deterrent to some farmers.

> *At the time, I'll be totally honest with you, I didn't see that being a huge barrier. And it turned out it was a barrier. And it's a shame because it was such a small footnote. It's definitely slowed things up in terms of uptake.*
> **Barry**

However, the requirement ensured that those who paid the fee were seriously considering installation.

> *It became evident that customers who were willing to pay the initial €200 fee showed genuine intent to proceed, which often led to full commitment.*
> **Solar Beo**

- **Slow progress**

The collective tendering process took time, and this caused tension with some farmers who wanted to go it alone. However, going with other suppliers meant they risked ending up with a much lower quality product for a higher price. Staying with the group meant they were assured of the highest quality for a very competitive price.

> *I got frustrated when things weren't happening, but I could see there was work being done in the background, everything takes time.*
> **Michael K**

> *At times, you'd hope things could move quicker. You'd be hoping that you could have it tomorrow or the day after, but that isn't the way things work, I suppose.*
> **Michael Dowd**

- **Financial Delays**

Energy Master Plan grant: The group applied to SEAI for €15,000 (the maximum at the time) to develop the EMP and then realized that they needed more money to cover the right amount of Wattrics devices. Séamus, as SEC mentor, spent time engaging with SEAI in the hope of getting more money. The group had to update the application form, submit it again, and wait.

Energy audit grant: Once the annual bill of a business is over €10,000 SEAI will provide a free energy audit. However, a lot of the smaller farmers didn't use that much energy but would still benefit from an audit in advance of deciding whether or not to install solar PV. Some funding was secured from Kerry Agribusiness to cover these audits, and more was promised from SEAI. There were delays in getting the money from both organisations.

> *There was no point at which Dinny let up the pressure, there was no point at which he went off and did something else. He was always waiting. We finally got this 10,000 from the SEAI, he'd been on to them and on to them. He got a lot of promises of help that never came through, a lot of people saying, oh isn't this wonderful, the West Kerry Dairy Farmers SEC is wonderful. But actually, when push came to shove officialdom let him down.*
> **Catríona**

- **Delays with NC7 applications to ESB Networks**

Most of the interested farmers decided to go for the SEAI solar grant under the micro-generation scheme, but it is a longer process than going for the domestic grant because of the requirement to make an NC7 application to ESB Networks. This used to take about three months, but it is now taking six months, or more, presumably because of the volume of applications and considerations around network/grid capacity.

- **The uncertainties and delays were problematic for the solar provider**

> *The time investment required unfortunately eroded the overall value of the tender and had a notable impact on our bottom-line margin.*
> **Solar Beo**

- **Export Limiting Scheme**

In a single-phase power connection, the electricity flows through a single conductor and can carry up to 230 Volts. In a three-phase connection the electricity flows through three separate conductors and can carry up to 415 Volts. Most of the farms in the group are single phase, so if they want to install an inverter over 5KVa, a domestic size one, they've got to go down the micro-generation route. But, because of a fear of overloading the grid and causing a crash and subsequent electricity outages, the farmers are now being hit with export limiting schemes, which means they can only export up to 5KVa of electricity (the excess that isn't being used directly onsite) back to the grid. A farmer could install a large array of panels, but a controller will be put on the inverter to ensure that no more than the allowed amount of power will be sent to the grid and paid for.

> *But it's not a deal breaker... it could be less than 5% of the solar energy being curtailed, so it wasn't really a big deal at the end of the day. But there's other things that might now need to be looked at, such as batteries. If you have a battery, then you can manage your export limiting scheme a lot better.*
> **Barry**

- **Renewable energy and energy efficiency is a dynamic space**

Policy, regulations and supports around solar PV keep changing. When the EMP process began, no-one could get paid for the excess electricity being exported to the grid, and the Tams grant for solar PV didn't exist. When the EMP report was being written it did not look like solar was very feasible, so it wasn't the number one contender, but then all this changed. More recently, the export limiting scheme was introduced and the price of electricity dropped which shifted the dial back again.

> *The biggest learning for me is stuff changes quicker than you expect.*
> **Barry**

> *We need to give people that we work with solid advice and tell them that there's a risk with everything - It's great getting a piece of paper that says payback in 3.2 years but so many things could change in a couple of years that can impact it.*
> **Barry**

- **Not as many farmers as expected are going for solar PV**

It was disappointing to realise that, in February 2025, 36% of the 86 farmers who joined the SEC were saying they had no plans to install solar PV.

> *There was a message sent out about how many of them were interested in doing it down the future and I was looking at some of the messages going back, and it was no and no, I was just disappointed after all the work that was put into it.*
> **Michael K**

- **Keeping the group together**

Some farmers became impatient, they were ready to go and weren't prepared to wait, so they began exploring their options with other solar PV companies. While this was frustrating, and to some extent hurtful because it did not seem to recognise the work that was being done to keep the group together and to secure a good collective deal, it was recognised that all solar PV installations contributed to climate goals. The WKDF SEC highlighted the importance of installing solar PV and helped convince farmers to install their own, whether within the group or outside of it.

> *We've put it into people's minds.*
> **Dinny**

> *Even if people don't get PV through this scheme, we have brought up the issue, it's become topical, it's become normal. People are getting it done. People who would never have thought of it are doing it. They might have done it in two or three years' time but they're doing it now because we have raised the whole issue and focused attention on it.*
> **Catríona**

- **Backlash and negativity from some farmers**

At times, the long delays and apparent lack of progress meant that some farmers got frustrated and they vented this frustration on Dinny as the driver and frontrunner.

- **Keeping the group going on a voluntary basis for the long term**

It is always difficult to keep people engaged and to maintain momentum when the group can only rely on the voluntary input of its committee members.

> *They're busy farmers, families. You're not getting any payment out of it, and it's your time going into it.*
> **Séamus**

SECTION 6 : Factors Shaping the Pace of Solar PV Adoption

- **Other priorities for financial expenditure**

Farmers may have other priorities or short-term needs for any capital they might have (and may not be swayed by any cost benefit figures provided)

> *It depends on what stage of development you are and maybe where you have to spend money. If you have to spend money on slurry storage, you're not going to be spending money on solar panels. The solar panels are the type of investment that you might consider making when you have some of the bigger stuff, maybe a milking parlour or slurry storage or cubicle shed or calf shed, animal welfare, when all of those things are looked after, because there's no point in having solar panels up on the roof of the sheds if you have a crappy ole milking parlour that you're half the day inside of. You'd be better off to put your money first into the milking parlour.*
> **Colm**

> *There's a guy I went out to, and everything is perfect, he wants to go for it. But his neighbour is selling a field, and he might want to buy that. He knows that's coming up for sale soon, so he needs everything he can in the bank to buy it.*
> **Barry**

- **Preparing for future power outages**

Farmers are prioritizing expenditure on farm generators in order to be able to milk cows if the electricity goes down.

- **2023 was a tough year for farmers**

2022 was a great year for milk, and the prices were high. 2023 was much tougher, prices plummeted, energy and fertiliser costs went up, the weather was very difficult, and farmers were also feeling stressed about changes coming down from government and EU regulation.

> *Last year things weren't great between farming and the weather and everything. So, I didn't go for it last year. I waited till this year, things have improved a little, so that's why I am going for it now. I put it off last year because it was something I wasn't ready for.*
> **Michael Dowd**

- **Electricity is just a small cost in overall expenditure**

> *If it's costing me 35 cents to produce a litre of milk, of that 35 cent what is electricity costing? It might only be half a cent. It's one of the smaller costs I'd say in the whole production. Our other costs, contractor charges, feed, fertilizer, they will be far, far greater than electricity.*
> **Colm**

- **Low payment for selling electricity back to the grid**

> *I remember Paul Deane saying, don't go into this just to think you're going to make money out of it, supplying back into the ESB. Use what you can of it, then whatever surplus you have, let it go back in. But don't go down the route of thinking you're going to make big money because you're not.*
> **Michael K**

- **ESB Networks NC7 application process**

NC7 applications to return power to the grid take a couple of months to get approval and each application costs €1,000. Also, there are now restrictions in areas where the grid is becoming overloaded.

- **TAMS (Targeted Agriculture Modernisation Schemes) requirements**

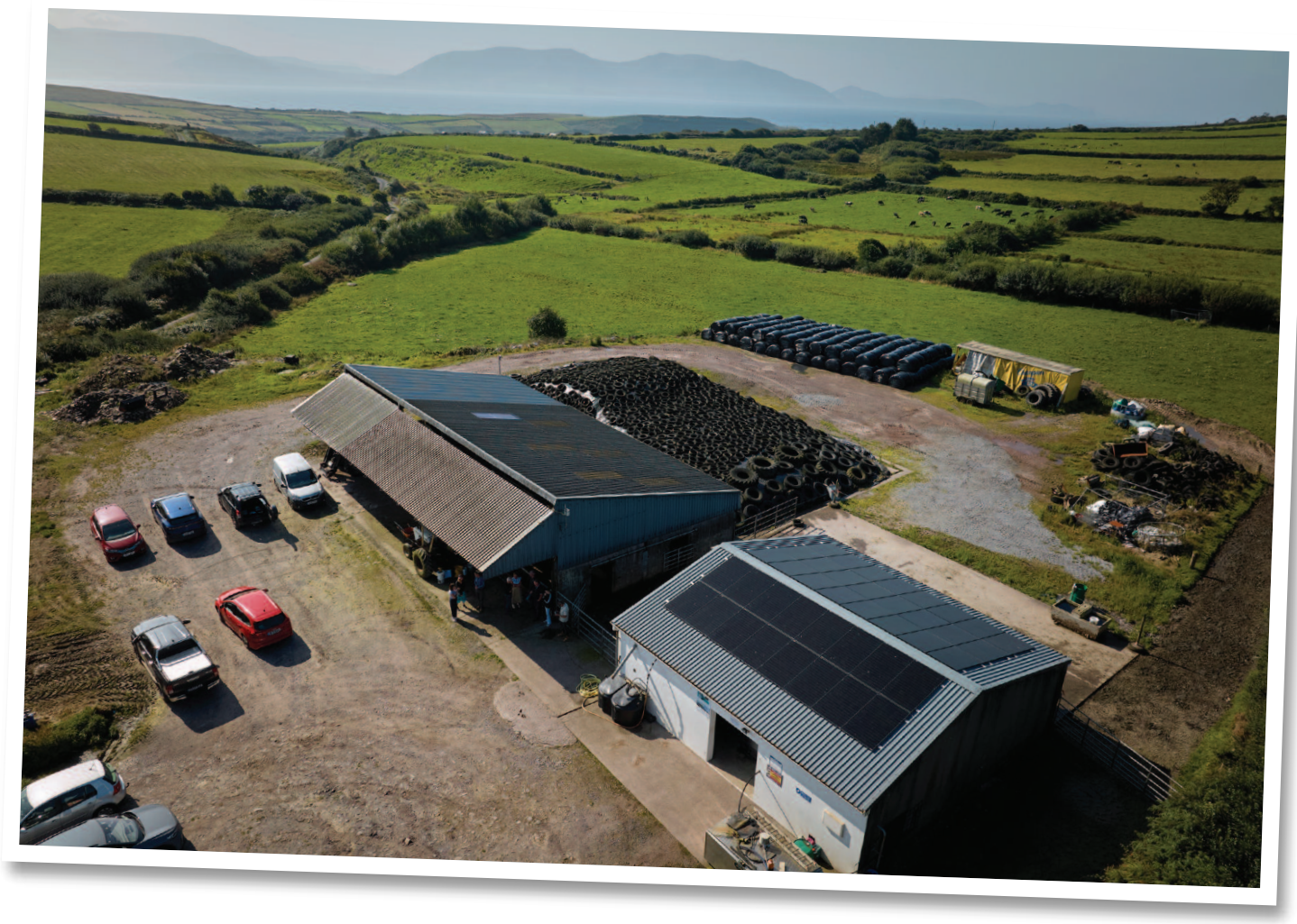
Farmers do not want to draw additional pressures and farms inspections resulting from the Tams application process.

- **Other problems have to be dealt with before Solar PV can be installed**

There might be a pre-existing problem with the immersion, or the smart meter has to be moved because it is in an enclosed space, or there are problems with the stability of the shed roof.

- **Mounting panels on a fibre cement roof**

At the time of launching the solar PV drive, SEAI would not approve the mounting of solar panels on a fibre cement roof, so it wasn't possible to draw down the SEAI or Tams grants. That has recently changed - a grant will be given once the roof is inspected and will last 20 years.



- **Having two separate meters**

> *That's another thing that's putting people off a small bit. Their house is linked to a different meter- if you've the one meter supplying the whole lot, you'd be lucky.*
> **Michael K**

- **High age profile of farmers**

Many of the dairy farmers in West Kerry are nearing retirement age and some have no direct, or interested, successor. It is therefore difficult for them to make decisions around additional financial expenditure in the short term.

- **Less farmers milking than when the SEC started**

> *For every two that goes out or maybe three, there might be one take over.*
> **Michael K**

> *It all depends on what stage of development they're at, what stage in their life they're at. Age is one thing, people like myself, a lot of them are looking at exiting.*
> **Colm**

However, it is hoped that now that solar PV panels are being put up on farmers' roofs in the area and a critical mass is being reached, other farmers are seeing how they are working and learning directly from their peers about the financial benefits. The SEC pathway is then there for them to get involved and the uptake should increase.

> *From talking to individuals, I reckon, in the next year, it will take off a lot more. I know solar has been around for a long time and I've been looking into it for a long time as well. But it's only when I see it going up there by Dinny and you look at it and look at other ones and some neighbours there that have done it as well on private houses. It's when you see it and see it working, and you see what's happening, it's then that there'll be more taking it on.*
> **Michael Dowd**

> *With anything that's new, everyone will talk and after a while, if it's working for one farm, they'll have a chat down at the mart, well, actually, now things are better, I might do the same now, because I can see that that's been beneficial for my neighbour, or whoever it might be.*
> **David**

SECTION 7 : Recommendations

RECOMMENDATIONS FOR PRACTICE

- **Farmers need to drive it forward**

> *Because they need to speak to each other and turn anything from those committee and group meetings into relevant information and instructions and out to quite a diverse group of farmers.*
> **David**

- **You need a strong leader with credibility who will stay focused on the end goal**

> *Getting somebody in the community that people would respect, they'll give them a chance and they'll listen to what's being said. That's probably the hardest piece.*
> **Barry**

- **Pick a small steering committee of no more than ten people**

> *You could have a steering committee of 50 or 30 and you would never get anywhere.*
> **Dinny**

- **Appoint a project manager**

A project manager is needed to manage the PV meitheal and to make sure it happens in a timely, efficient way and that all of those wishing to install PV fully understand what's involved, what it will cost, what will be generated, what are the pitfalls, and how to use and understand the technology.

- **Draw in people from the community who already have knowledge and skills, especially around energy sustainability and policy**

- **Do your homework and speak to people who have already walked the walk**

- **Focus on one or two things**

> *If you're involved in too many things, nothing gets over the line and you will lose the crowd.*
> **Claire**

- **Be honest with the farmers**

> *You have to bring them on board from the start.*
> **Michael Dowd**

- **Try to keep everyone together**

> *Get information out there.*
> **Michael K**

- **Organise training and induction workshops at the outset**

More interactive engagement works better than just delivery of information. Workshops could include practical demonstrations on how to use the technology, the monitors, inverters, the Eddi solar power diverter, the apps, etc. A workshop could be held with farmers on what kind of PV system would work best for them.

- **Gather more socio-technical information during the EMP phase**

For instance, information around age profiles and farm fragmentation could help predict what kind of farms, and how many, will be around in the area in 20 years' time and what their energy requirements might be.

> *I was very focused on the power of the technology, the consumption of it. If I was doing it again, I'd have gathered a bit more information about the people that were using the farms. It's an interesting industry and so many things are changing.*
> **Barry**

- **Provide greater certainty and value for both farmers and solar PV companies, while also encouraging broader industry participation and smoother project delivery**

Solar Beo suggests that for future solar meitheal tenders it may be worth:

- Including an allowance for 'wastage', for example, where 60 expressions of interest result in only 20 installations.
- Agreeing on a minimum number of confirmed participants, or requiring a refundable deposit payable to the SEC.
- Setting in place a clearly defined start and end date to help convert more farmers earlier, mitigating the tendency to defer decision-making.

- **Encourage the farmers to secure a good energy broker**

Once you get approval from ESB Networks for your NC7 application and you then sell back to the grid, this automatically changes your contract with your electricity supplier. Dinny ran into difficulty here and was over charged for about 10 months. He also had a smart meter installed in his milking parlour, set to 'day and night peak'. This was incorrect as the peak was catching evening milking at a higher cost per kW. The meter has also now been replaced with a 'day night' smart meter which is also recording what is been exported back to the grid. Both problems were sorted thanks to the intervention of an energy broker.

RECOMMENDATIONS FOR POLICY

- **Resource the co-ordinating organisations**

> *It was the Dingle Hub who got us together, and you need more Dingle Hubs.*
> **Dinny**

- **The agencies need to get the staff in place to deal with the upsurge in interest and to avoid delays**

- **ESB Networks should find a way of batching requests**

> *To speed up the process can a way be found to group different kinds of requests and address them together, e.g. those that have a high demand or will be exporting a large amount?*
> **David**

- **SEAI should replicate success**

> *I think there's an opportunity there, when there are successful groups, to try to replicate it in a unique way somewhere else. I do think SEAI could be better at that.*
> **Séamus**

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The real work begins now, to deliver on the EMP findings. This will help the farming community to reduce emissions and save on energy costs. This will further help to sustain a vibrant dairy industry, a corner stone of Irish life and the Irish economy. It has also opened doors for participation for the farming community on the Enpower energy platform.

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