



## Background

In April 2018, the Dingle Peninsula Sustainable Energy Community (SEC) was established under the aegis of **Mol Teic (Dingle Creativity and Innovation Hub)** [1]. The **SEC network** is coordinated by Sustainable Energy Authority of Ireland (SEAI), with the aim of encouraging and supporting the involvement of communities in the transition to a low carbon future [2]. It offers a number of sharing and learning opportunities, as well as providing access to grant support. While there are currently more than 450 registered SEC's, the Climate Action Plan envisages the establishment of 1,500 SEC's by 2030 [3].

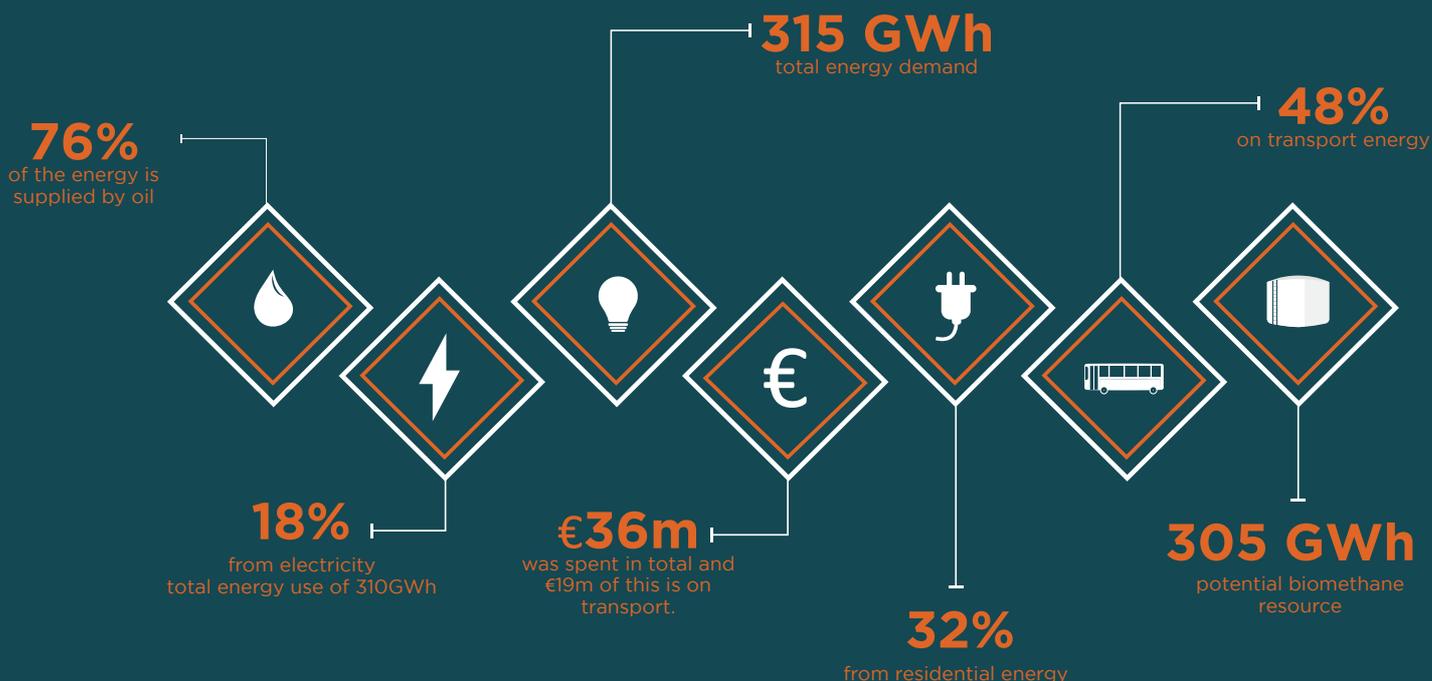
A vital first step in the development of an SEC is to understand the community's current energy balance within the SEC area and to develop a 'Register of Opportunities' that identifies what specific projects could be undertaken to reduce the energy usage and switch to renewable energy.

In October 2018, following a tendering process, the Dingle Peninsula SEC commissioned the production of an **Energy Master Plan** for the Peninsula, at a cost of €20,000 [4]. The work was completed in June 2019, and, following review by the Steering Committee and additional analysis from the **MaREI Centre** [5], an **Energy Master Plan** was subsequently published in February 2020 [4].

## Aims and Objectives

The Energy Master Plan (EMP) provides an overview of the community's current energy demand, as well as the options available for reducing energy usage and switching to renewable energy sources. The purpose of the EMP is to begin a conversation about the local energy system and the necessary changes, in order to transition to a low carbon future. In particular, the Dingle Peninsula SEC focused on the actions required on the Dingle Peninsula, over the next decade, to meet the targets set out in the **Government's Climate Action Plan**, which was published in May 2019 [3].

The key findings are displayed below for the chosen year of analysis; 2016. For further details please see <https://dinglepeninsula2030.com/wp-content/uploads/2020/02/Dingle-SEC-Energy-Master-Plan-February-2020.pdf> [6]



A timeline of the key events:

- December 2017 - Partnership application submitted to SEAI
- April 2018 – Dingle Peninsula SEC formally established
- 4th July 2018 – Tender process and approval from SEAI for appointment of consultants to undertake the EMP
- 4th September 2018 - Letter from consultants with their work programme, based on a reduced fee (of €20,000)
- 14th September 2018 – Signed letter-of-offer given to consultants
- 26th July 2019 – Final Report received, after a number of comments had been sent to the consultants based on their draft reports
- 16th September 2019 – Meeting of Steering Committee to consider consultant’s EMP. Decision made to use some of the consultants’ report (but not all of it) and to utilise further analysis by MAREI
- 13th February 2020 – Event held to launch the revised EMP

In addition, the Steering Committee met a further five times during the process to discuss key developments, outputs and make decisions.



## Lessons Learnt

- There were some issues with financing the EMP. Firstly, there was a misunderstanding about the inclusion of VAT in the grant amount awarded leading to a delay in getting approval due to a. This can create some tension with the consultants as it required re-arrangement of work schedules. The SEAI letter of offer took longer than anticipated, which meant the consultants couldn't conduct the analysis in the timeframe they originally had to. Secondly, due to the fact that the grant is only awarded after the work is complete, the SEC may have had to take out a loan to pay the consultants. In this case, it resulted in a loan interest payment of €546 that had to be covered by the Dingle Peninsula SEC. This can be an issue for community groups and is unnecessary expenditure for them to bear.
- In an attempt to build an aggregate model of the Dingle Peninsula building stock, a business and household survey was created. However, this proved a very resource and time-intensive means of data collection, as the response was low, until people were called personally and/or incentivised to participate. The survey likely asked for too many technical details, such as the level of attic insulation, type of walls, U-values of building elements, etc.
- In relation to the data required, it was difficult to get access to (and use of) existing data within public bodies. For example, the Valuation Office has previously provided data on the floor area of properties for the Dublin Energy Agency Codema [7]. However, despite having the support of the Kerry County Council, the Dingle Peninsula SEC and SEAI were unable to get access to the same data. It should be noted that this was in part due to the recent release of GDPR and subsequent uncertainty public bodies had about sharing data.
- The experience of the Dingle Peninsula SEC, along with research from MaREI on existing EMPs, [8] highlighted the following issues;
  - The lack of consistency and the wide range of different methods used across the reports.
  - The reliance on crude proportioning to determine the local area's energy balance, based on population, number of employees or hectares of farmland.
  - The use of the BER database to calculate the energy demand in residential premises, despite the fact it is well known to over-estimate the energy demand of low-rated houses [9].
  - The use of vehicle engine efficiencies to determine the transport energy demand, despite the fact it is well documented that the test conditions do not represent real-life, with cars consuming around 40% more fuel on the road [10].
  - The proposal of targets for deep retrofits, heat pumps or electric vehicles based on applying chosen percentage figures to the local SEC area, without any particular consideration of what could be feasibly implemented by the local community.
- While the **EMP process** [11] outlined by SEAI has been amended since the Dingle Peninsula EMP was completed, the lessons from the Dingle experience merit consideration. There needs to be better guidance for the development of EMP's in order to improve both the quality of the analysis and, importantly, to support greater engagement with SEC's in its development. More use should be made of the data held by public bodies to pre-populate an EMP template, rather than paying consultants to do this. The value-added by consultants could then be more in relation to the development of the Register of Opportunities or BER assessments.
- Consultants coming from a technical background do not generally have experience with community engagement and thus may be unwilling to engage meaningfully with the SECs. They often see their role as solely to produce the EMP (based on their analysis). They should be encouraged to support the community with an engagement process to develop and disseminate the EMP findings.

## Recommendations

### SEAI Register of Consultants

It is recommended that SEAI would organise a public tendering competition for EMP consultants rather than the SECs being obliged to tender for consultants. This would reduce the need for community groups to develop capacity to meet with obligations (and requirements) for compliance with public tendering rules when appointing a consultant and to develop the level of expertise and experience to assess applications. Consultants would then be placed on a register of suitable consultants for the production of an EMP for SEC's, as is done with other SEAI grant schemes.

When an SEC wishes to produce an EMP, they could contact SEAI and seek approval to choose a consultant, or a number of consultants, from the pre-approved list. The SEC would then submit its requirements to one (or up to three) consultants and select with assistance from the local SEAI mentor. The consultant could then be hired to undertake the production of an Energy Master Plan for the SEC - but the consultant would be hired by SEAI and payment would issue directly to them which SEAI (or alternatively by the relevant local authority, who can be reimbursed by SEAI);

The benefits of this approach would be as follows:

- 1) Easier and quicker for local SEC's to get started on the EMP - usually the first major task for the SEC and important to get early buy-in;
- 2) Greater confidence that the public procurement rules are being complied with in respect of the EMP; and
- 3) SEC's do not have to borrow money to pay consultants; then wait for repayment by SEAI; and possibly pay interest on the loan as well.

### Development of a National Template for Energy Master Plans

It is recommended that a national template be developed for Energy Master Plans and that this template could be pre-populated with data for each SEC area, as required. The role of the consultants would then become much more focused and should cost a lot less.

With proposals in the Climate Action Plan for 1,500 SEC's [3] and each one requiring an Energy Master Plan (at a cost of up to €20,000 each), the total cost for the EMP's could be c. €30 million. This could be seen to be very expensive for the reports provided, particularly if a new template could be pre-populated by SEAI, with data held in public bodies and then provided to the local SEC's, with options on the various targets to be achieved. Any outside expertise could then be more focused and dedicated to the Register of Opportunities and carrying out of some energy efficiency and/or BER assessments.

### Building a National Database

In the absence of data on energy below the national level, the estimation of a community's energy balance in EMP's relies on proportioning national data to the local level or building an aggregate model. Both of these methods are quite crude and require a number of assumptions to be made, as the necessary statistics are often not available below the regional or county level. However, a national database could be developed detailing the energy balance and associated emissions in each county. This would prevent public funds being wasted on the development of each EMP afresh. Resources could then be put to better use, by for example, offering training sessions for local authorities on this issue; conducting proper feasibility studies for SECs; or undertaking specific BER assessments.

An important element of building this national database would be to collaborate with key sources of information, such as the Central Statistics Office, Valuation Office or utility providers. The completed database should provide as accurate as possible an energy balance for each county, as well as key indicators of energy demand, building floor area and purpose, vehicle fuel type and age.

## Recommendations

### Giving the Local Authorities a Mandate

In line with the above recommendation, local authorities should be given a mandate to take greater responsibility for energy planning in their area and an active role in supporting local SECs. The Planning Department and Municipal District Local Area Plans will define what can and cannot be built in an area, making the County Council a vital decision maker. In addition, with the mandate for local authorities to get a good understanding of energy in their functional area, greater effort could be put into gathering important data, such as details on the building stock or car fleet.

### Providing comprehensive support to help engage local communities in the Energy Master Plan process

It is very important to engage the local communities both in the development of the Energy Master Plan and in getting community support for the various initiatives to be undertaken afterwards, including the implementation of the Register of Opportunities.

There would be benefits in providing resources (including financial) to the SEC to enable the launch and rollout of the EMP. MaREI has some good resources that were developed for the **Dingle Peninsula 2030** initiative including material for a 'Climate Hack' in secondary schools and organising Light-Bulb Exchanges (see Outputs under <https://www.marei.ie/project/dingle-peninsula-2030/> for details). Furthermore, in conjunction with the Kerry Education and Training Board, a course was developed for **Community Energy Mentors**.

In line with offering suggestions or templates for events and activities, a vital component would be the availability of financial support for the co-ordination and running of these engagements. SECs cannot be expected to work solely on a voluntary basis with self-raised funds. A portion of the EMP grant support should be put into SECs work on coordination and dissemination.

## Acknowledgement

The Dingle SEC would like to acknowledge, with gratitude, the support of the SEAI in funding the Energy Master Plan and the members of the Steering Committee; Sandy McSwiney, Gerry Riordan, Jimmy O'Leary (KCC); Connor McGookin (MaREI); Billy Horgan (DAFM); Claire McElligott (ESB Networks); Deirdre de Bhailís, Brendan Tuohy (Dingle Hub) and Xavier Dubuisson (SEAI Mentor).

This series of learning briefs is co-founded by MaREI, the SFI Centre for Energy, Climate and Marine, the Dingle Creativity and Innovation Hub (Mol Teic), ESB Networks and North East West Kerry Development (NEWKD).

## References

1. Dingle Creativity and Innovation Hub (Molteic). *Dingle Sustainable Energy Community*. 2019; Available from: <https://dinglepeninsula2030.com/projects/energy/sustainable-energy-community/>
2. Sustainable Energy Authority of Ireland. *The Sustainable Energy Community Network*. Available from: <https://www.seai.ie/community-energy/sustainable-energy-communities/join-the-sustainable-ener/>
3. Department of Communications, Climate Action and the Environment. *Climate Action Plan*. 2019; Available from: <https://www.gov.ie/en/publication/cb2e0-the-climate-action-plan-2019/>
4. Dingle Creativity and Innovation Hub (Molteic). *Dingle Peninsula Energy Master Plan*. 2020; Available from: <https://dinglepeninsula2030.com/projects/energy/energy-master-plan/>
5. MaREI Centre. *Dingle Peninsula 2030*. 2020; Available from: <https://www.marei.ie/project/dingle-peninsula-2030/>
6. Codema; Dublin's Energy Agency. *Developing CO2 Baselines; A step-by-step guide for your local authority*. 2017; Available from: [https://www.codema.ie/images/uploads/docs/Developing\\_CO2\\_Baseline\\_-\\_A\\_Step-by-Step\\_Guide\\_for\\_your\\_Local\\_Authority.pdf](https://www.codema.ie/images/uploads/docs/Developing_CO2_Baseline_-_A_Step-by-Step_Guide_for_your_Local_Authority.pdf)
7. McGookin C., Ó Gallachóir B., Byrne E., (2019) 'Developing a regional energy balance; Case study from the Dingle peninsula', Environ. IT Carlow, 18-20 April 2019
8. Dineen, D., F. Rogan, and B.Ó. Gallachóir, *Improved modelling of thermal energy savings potential in the existing residential stock using a newly available data source*. Energy, 2015. 90: p. 759-767.
9. International Council on Clean Transportation. *Real-world fuel consumption and CO2 emissions of new passenger cars in Europe*. 2017; Available from: [https://theicct.org/sites/default/files/L2R17\\_ICCT-fact-sheet\\_EN\\_vF.pdf](https://theicct.org/sites/default/files/L2R17_ICCT-fact-sheet_EN_vF.pdf)
10. Sustainable Energy Authority of Ireland. *Sustainable Energy Communities; Community Partnerships*. 2020; Available from: <https://www.seai.ie/community-energy/sustainable-energy-communities/>