



APRIL 2023

STRATEGIC PLAN

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INTRODUCTION

Background

Inishowen Sustainable Energy Community (SEC) was established in 2019. It grew out of a collaboration between the Inishowen Development Partnership (IDP), the Inishowen Co-Operative Society Limited, Donegal County Council (DCC) and a diverse group of stakeholders across the Inishowen community. It was established with a common purpose, a focus on sustainability and a vision to change the energy landscape to develop a circular economy and bring about a just transition in the region.

To achieve these goals, the SEC has developed an Energy Master Plan (EMP) with the support and assistance of the Sustainable Energy Authority of Ireland (SEAI) and ATU Sligo. The EMP was launched in July 2021 and outlined the SEC's plans to develop a community-led renewable energy sector in the region. The SEC aims to lead these developments for the region's benefit with ambitious targets of developing a Renewable Energy Centre of Excellence (RECoE), among other projects.

Work has since gathered pace, with projects focusing on real change in line with climate action goals and targets, for example, retrofit applications for residential homes, collaborations on community-owned/benefit renewable electricity production projects, application and awarding of Decarbonising Zone status to Carndonagh and supporting the launch of the ECO Carn Biodiversity Plan led by prominent environmentalist Duncan Stewart. This period was capped with the award of SEAI's prestigious Inspirational Energy Community Award for 2021.

The EMP provided the data and a snapshot of the current scenario. To build on this work, the SEC requires expertise to provide a robust and clear roadmap outlining the essential steps to harness the sustainable energy potential in the region for both residential and non-residential purposes. In essence, this strategic plan will maximise the opportunity to pilot a green and sustainable development programme in Inishowen for the benefit of all stakeholders.

Aims & Objectives

The Inishowen Sustainable Energy Community, led by the IDP, commissioned a project to develop a strategic plan for Inishowen to become a sustainable, resilient, prosperous, inclusive, and liveable community.

In late 2022, the project was undertaken by a consortium composed of ConsortiaCo and Amicitia, with national and international expertise in implementing projects to support renewable energy development, climate action, a just transition, and funding strategies in line with the European Green Deal. This project is funded through Enterprise Ireland's new Regional Enterprise Innovation Scoping Scheme 2022 (REISS).

While the EMP provided the blueprint for change, this Inishowen Sustainable Energy Community strategic plan sets out a clear but non-linear path that responds to the community's vision for a more sustainable and prosperous future in a rapidly changing environment.

Four strategic objectives are defined for its achievement:

Strategic Objective		Expected Outcomes
Strategic Objective 1	Resilient and Prosperous Community	Enhance the community's access to alternative income-generation activities and support services that promote rural employment and market access.
Strategic Objective 2	Decentralised and Decarbonised Community	Enhance a more reliable, efficient energy system that is less open to large-scale vulnerabilities than traditional centralised energy systems.
Strategic Objective 3	Participatory and Cooperative Community	Develop a culture of organisational excellence and collaboration to achieve the vision.
Strategic Objective 4	Empowered and Thriving Community	Unlock the potential in people to overcome challenges, build resilience and move them to a position of empowerment to thrive together.

Methodology

Many plans and roadmaps fail by assuming linear and static pathways to transformation and change. Transformational change is, by its nature, unpredictable and uncertain. Therefore, it is necessary to adopt a whole-systems approach to develop a comprehensive roadmap for the region's sustainable future.

To accomplish this, inclusive co-design methods were used to capture diverse perspectives from the community, stressing the importance of listening to those that will be affected most by the transition to a carbon-neutral society, such as the farming community and young people. This ensures that the plan reflects the diverse needs and aspirations of the community, and everyone has a say in shaping the future of their region.

The development process embraced a crosscutting theme from the EnVision¹ series: "The natural environment as the greatest asset of the peninsula." This theme emphasised the importance of protecting and enhancing the natural environment to ensure the region's long-term sustainability. The plan, commissioned by IDP in 2021, recognises the crucial role that natural assets such as forests, water bodies, and wildlife play in the region's economy, culture, and well-being.

By adopting a whole-systems approach and engaging diverse stakeholders, the project team was able to create a strategic plan that is robust, flexible, and responsive to changing circumstances. This approach acknowledges that transformational change is unpredictable and uncertain, and any plan must be dynamic and adaptable to ensure the region's sustainable future.

The process began with an analysis of global, European, national, and regional policies, targets, and frameworks coupled with extensive desk-based research to thoroughly understand the macro and micro backdrop for Inishowen, including an assessment of the community energy potential in the region. To complement this data, in early 2023, a broad participatory process was carried out, bringing together more than 40 local actors, including members of the core Inishowen SEC team and 30 participants across three participatory workshops.

¹ [Envision Inishowen Series](#), IDP Summary Report 2021.

Phase 1 – Desk based research and analysis

Throughout this phase, we captured data and insights to understand the emerging trends while identifying critical stakeholders at the niche innovation levels, which can act as a catalyst for bottom-up change across the Inishowen peninsula.

Insights were analysed in the context of broader policy documents, including the EU's European Green Deal strategy as it relates to Ireland, Fit for 55, the Just Transition Mechanism, the EU's 2030 Agenda for Sustainable Development (SDGs), REPowerEU plan, Our Rural Future: Rural Development Policy 2021-2025, and other relevant policy documents.

This phase of discovery and diagnostics was conducted in close collaboration with Inishowen SEC to provide a snapshot of the community ecosystem, exploring the various stakeholders and actors, their needs, activities and overall position within the community.

Phase 2 – Shared vision: community & stakeholder consultation

In February 2023, a wide variety of stakeholders were engaged through a series of co-creative workshops. These workshops covered the following thematic areas:

1. A Just Transition for the Agricultural Sector
2. Youth Training & Employment Pathways
3. Inishowen Sustainable Energy Community

Through a design-thinking approach to organisational development and a framework for empathy-led progressive development, the consultation period successfully supported the community by identifying community-led projects across short to long time horizons.

The Three Horizons model² was used across all three workshops to frame conversations around the understanding that all businesses, technologies, and political policies exhibit life cycles of initiation, growth, peak performance, decline. These cycles can be viewed as waves of change in which a dominant form is eventually overtaken and displaced by another, as visualised in Figure. 1 below.

² [Three Horizons](#), Bill Sharpe, 2019

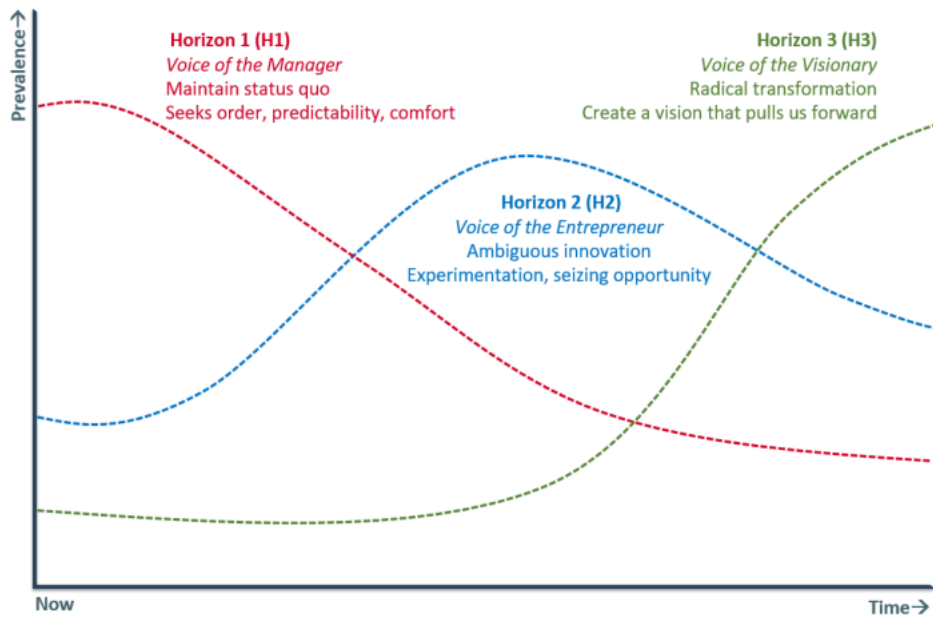


Figure.1: Three Horizon Model

Three Horizons is effective because it recognizes that each horizon represents a different orientation towards the future and the people associated with each horizon have different interests, values, and mindsets. Cultural factors play a role in the interaction between horizons, alongside economic and technological factors. To avoid conflict or collapse during transformational change, it is necessary to understand and consider all three mindsets and take them into account.

Graphic harvesting was used to visually capture these different ideas and perspectives shared during this community consultation. The process involved realtime discussions and engagement, which were then mapped to large, hand-drawn illustrations that summarise the key themes and ideas as a form of visual storytelling that maps shared language from each of the workshops as shown in Figure. 2, 3 and 4 below.



Figure.2: Inishowen graphic harvest - agricultural sector

The graphic harvest represents the hopes and aspirations of the community. It reflects the need for cross-sectoral collaboration across all horizons to bring shared visions of the future into being while also appreciating the past efforts of the community.

It visualises the institutional and cultural barriers to change and the personal motivations of local people to respond to the climate and biodiversity emergency.



Figure.3: Inishowen graphic harvest - youth and employment

Importantly, it visualises the sustainable energy potential that exists in the region which presents new opportunities for the community to shape their destiny by embracing change and new forms of business, education and sustainable development.

Phase 3 – Strategy development, action planning and roadmap design

The project's final phase crystallised the key enablers to support the evolution of Inishowen SEC and the funding levers necessary to secure the primary objectives of the roadmap. In addition, the challenges and barriers that need to be overcome and the essential infrastructure to facilitate the future aims of the SEC were identified through benchmarking, skills and needs analysis, and value mapping.

A core component of the strategic roadmap was the design of a bespoke clustering model for the Inishowen SEC and the wider community, which offers pathways towards advanced collaborations, deeper community engagement and coordinated activities that will generate positive social impact in the long term.



Figure.4: Inishowen graphic harvest - cross-sector collaboration

Purpose of this document

This strategic roadmap aims to provide clarity and direction amidst the change and evolution of the project's key area of focus - sustainable energy transition, which has been impacted by rapid movements in the local community and national landscape.

This document aims to provide a clear and comprehensive understanding of the project's current status, including the challenges, the steps taken to address them, and the unique opportunities presented to Inishowen as a leader in the sustainable community development of the North-West region.

By outlining the project's evolution and critical success factors that will influence the growth of the SEC in the years to come, this document will help ensure that all stakeholders are working towards a shared vision for the project's success. Furthermore, the strategy aims to provide a roadmap for the project's ongoing development, highlighting key milestones and actions that need to be taken to achieve the project's ultimate goals. Central to this will be alignment with the view of Executive Vice-President of the European Commission Frans Timmermans, who states, "It must be a just transition or there will be no transition".

The final roadmap, grounded in the principles of a just transition, outlines concrete actions, time frames, and responsibilities to implement the long-term strategy. It will represent the participatory engagement with primary stakeholders in Inishowen and convey a shared commitment to a collective course of action.

Given the current uncertainty and volatility, the Inishowen SEC strategic plan should not be considered a set and rigid one. Instead, it aims to build the capacity of the community to be adaptable and flexible in response to changing policy and funding landscape and the emergence of new opportunities resulting from experimentation and continuous community engagement. The next section of the document sets the scene by exploring the changing policy and funding landscape in more depth.

SETTING THE SCENE

The Global Challenge

“There has never been a better time to provide an alternative to the current energy system. The climate emergency is being debated in the EU Parliament given this summer’s devastating droughts and forest fires across the continent. The Russia-Ukraine war has led to a situation which sees widespread energy poverty among low and middle income European citizens becoming a reality. Given the accelerating energy price crisis and the looming winter, previously unimaginable measures are being discussed in Brussels like a REPowerEU fast-track plan to transition from fossil fuels to renewables⁵ and a windfall tax on oil and gas corporations. All this explicitly recognises the need to transition away from fossil fuels, in a just and inclusive way.”³

Local Context

The latest IPCC report⁴ stresses the urgency of taking climate action to secure a liveable future for all. The choices made in the next few years will be critical in deciding the future of generations to come. To be effective, these choices must be based on diverse values, worldviews, and knowledge, including scientific, Indigenous, and local knowledge. This approach will facilitate climate resilient development and allow for locally appropriate, socially acceptable solutions.

The peninsula of Inishowen in County Donegal represents an area of good size, scale and sustainable energy potential to take immediate, community-led, climate action. This is highlighted in the plans for the North-West region which states that “Inishowen is small enough to test green opportunities and approaches and big enough to demonstrate possibilities⁵” This report also reiterates the sentiment from the IPCC by stating that “a uniform approach to what transition might look like and required interventions and supports will have limited effect, as local conditions play a critical role in determining effectiveness and impact.”⁶

The peninsula measures 884.33 square kilometres (218,523 acres) and is bordered to the north by the Atlantic Ocean, to the east by Lough Foyle and to the west by Lough Swilly. It is the largest peninsula in Ireland and is known for its picturesque scenery and rich history. Most of Inishowen's population inhabit the peripheral coastal areas, while the interior landscape consists of low mountains, mostly covered in bogland. Inishowen has several harbours, some of which are used for commercial fishing purposes, including Greencastle, Bunagee and Leenan. A seasonal ferry service crosses the Foyle, connecting Greencastle with Magilligan in County Derry, while another crosses the Swilly, connecting Buncrana with Rathmullan. Inishowen is unique because of its location and circumstances.

The total population is 39,330 with a “comparatively higher dependence (11%) on primary economic activities. Building and construction activity is more important to the local economy (average 8%) compared with the national average (5%). These sectors (agriculture, forestry, fishing, building and construction) are particularly vulnerable to the changes that will be needed to meet climate action

³ [Energy Communities in the EU | Opportunities and barriers to financing](#), October 2022; Page3

⁴ [Urgent climate action can secure a liveable future for all](#) | IPCC |

⁵ [Exploring Place-based Opportunities for Policy and Practice in Transition](#) | Research Paper, July 2022; Page16

⁶ [Exploring Place-based Opportunities for Policy and Practice in Transition](#) | Research Paper, July 2022; Page46

targets and thus the transitions required here are likely to have significant impacts”⁷. The agricultural sector, smaller farmers are heavily reliant on subsidies and off farm income impacting on the time available to learn or adapt to more sustainable or regenerative farming practices.⁵

“There is currently no strong culture of change for farming in the county and there is a fear of losing subsidies in the face of a transition to a lower carbon economy. A reduction in farmer agency is in part due to a culture of subsidy support which may have contributed to de-skilling and a lack of dynamism in the sector. Soil and ecosystem health has been affected in parts by cessation of grazing and drainage.”⁸

Significant challenges also exist in the housing sector. According to the Inishowen Energy Master Plan, 61% of houses on the peninsula were constructed pre 2001, and over 10% in the earlier half of the last century⁹. This indicates that while a very large number of homes present opportunities to improve energy efficiency and reduce their energy requirements, these types of buildings also present many challenges due to the historic construction.

The EMP findings also show that homes within the region are of a building stock (1980-1990’s), which during that period typically had a relatively poor level of building control regarding energy efficiency. This resulted in a large proportion of homes having very poor insulation, with external walls containing little to no material which would limit heat loss. It should also be noted that any efforts to accelerate progress in housing are hindered by the ‘Defective Concrete Blocks Crisis’ - severe cracking from defective concrete blocks - across Donegal which is having a huge impact on quality of life, mental wellbeing and socio-economic development.

Progress in the region is further impacted by the significant numbers of the local population that cross the border for work or education. As shown in Figure.5 this is particularly acute in Inishowen which impacts on the vitality of a region and leads to an over reliance on private cars as a mode of transport.

⁷ [Exploring Place-based Opportunities for Policy and Practice in Transition](#) | Research Paper, July 2022; Page11

⁸ [Exploring Place-based Opportunities for Policy and Practice in Transition](#) | Research Paper, July 2022; Page49

⁹ Inishowen Energy Master Plan, 2021; page19

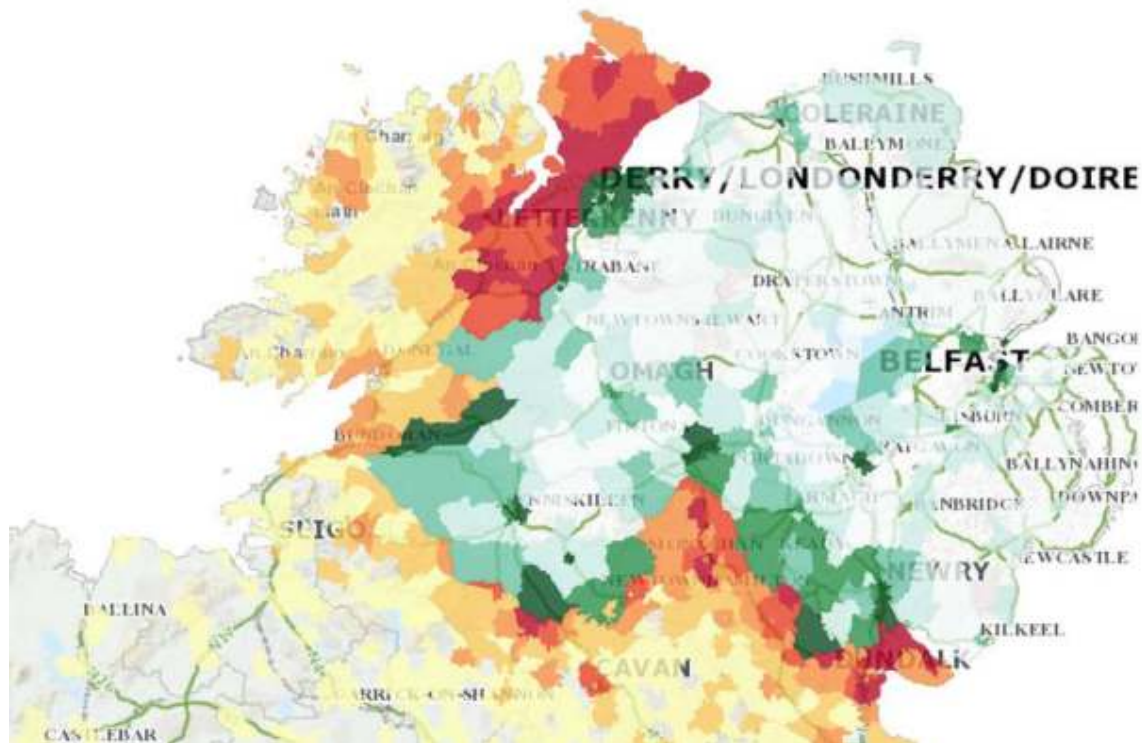


Figure.5: CSO map - Inishowen cross-border commuters

“The north-west of Ireland has for many decades had weaker economic prosperity relative to the rest of the country and has been reclassified by the European Commission from a ‘More Developed Region’ to a ‘Transition Region’ for the Post 2020 (2021-2027) funding period (NWRA, 2020). There is a history of underinvestment in the area, low educational attainment and high unemployment and acknowledging this is the first step to examining a place based approach to just transition in Donegal and the North West city region. However there is also significant potential and the Regional Spatial and Economic Strategy 2020-2032 identifies sustainability as the fifth pillar of growth and central ingredient for successful places¹⁰.”

As highlighted in the The People’s Transition¹¹ “If climate action is to be fast, it must be fair. If it is to be enduring, it must be inclusive. If it is to benefit from widespread public support, it must share benefits and burdens equitably and fairly.” Building on the local potential, assets, and capabilities in a region - as advocated by Amartya Sen - the core focus switches to what individuals are able to do (i.e. capable of) to ensure that a specific cohort of workers or their communities are not disproportionately impacted by the transition to a carbon neutral society.

According to the EnVision Inishowen Series Summary report, the resilience of people from the area has evolved to tolerate economic, social, and health inequality. However, this same resilience has also led to creativity, locally derived solutions, an appreciation of diversity, and a capacity to celebrate uniqueness. The report emphasises the importance of natural assets, such as the green and blue economy's eco-focus and the potential of young people for innovation and green growth. The vision mapped out for Inishowen in this report is a circular, productive, rural economy that is

¹⁰ [Exploring Place-based Opportunities for Policy and Practice in Transition](#) | Research Paper, July 2022; Page11

¹¹ [The People’s Transition: Community-led Development for Climate Justice](#) | TASC, 2020

productive, inclusive and equal.¹² Global and national policy will impact on the region's ability to achieve this vision. The next section maps out the policy landscape with the acknowledgement that this is changing quite quickly and this section presents a summary at the time of publication of this document.

Policy Landscape

The Paris Agreement¹³ charted the route for the EU to follow. It calls on all parties to keep global average temperatures well below 2°C and to pursue efforts to keep temperature increases to 1.5°C above pre-industrial levels, recognising that doing so would greatly decrease the risks and impacts of climate change.

European Union

The European Green Deal¹⁴ affirms the EU's response to the Paris Agreement's demands. This strategy lays out a comprehensive approach to achieving carbon neutrality in Europe by 2050. The ambition of The European Green Deal is to transform the EU into a modern, resource-efficient and competitive economy, ensuring:

- no net emissions of greenhouse gases by 2050.
- economic growth decoupled from resource use.
- no person and no place left behind.

One third of the 1.8 trillion euro investments from the NextGenerationEU Recovery Plan, and the EU's seven-year budget will finance the European Green Deal. The Green Deal is the framework that, among other things, places climate change at the centre of EU policy by introducing radical new plans and strategies for agriculture, building renovation, renewable energy, methane emissions, sustainable investment, and the circular economy.

Importantly, the Green Deal also includes The European Climate Law which came into force on 29 July 2021. This law sets the long-term direction of travel for meeting the 2050 climate neutrality objective through all policies, in a socially fair and cost-efficient manner. The climate law provides predictability for investors and other economic actors by incorporating a system to monitor progress and taking further action if needed. The Climate Law also ensures that the transition to climate neutrality is irreversible.

As a first step, the Commission proposed an initial set of targets to be met by 2030. On 14 July 2021, the European Commission adopted "Fit for 55", a set of policy proposals preparing the implementation of the European Green Deal. In particular, Fit for 55 aims to reduce greenhouse gas emissions (GHG) by at least 55 percent by 2030.

Energy

A key element in the 'Fit for 55' package is the revision of the Renewable Energy Directive (RED II), to help the EU deliver the new 55 % GHG target. Under RED II, the EU is obliged to ensure at least 32 % of its energy consumption comes from renewable energy sources (RES) by 2030. The revised RED II

¹² [EnVision Inishowen Series Summary Report, 2021](#); Page5

¹³ [The Paris Agreement](#) | UNFCCC, 2015

¹⁴ [The European Green Deal](#) | EU, 2019

strengthens these provisions and sets a new EU target of a minimum 40% share of RES in final energy consumption by 2030, accompanied by new sectoral targets. As part of the REPowerEU¹⁵ plan, the Commission proposes to further raise this RES target to a 45% share by 2030.

The REPowerEU was introduced to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition. This includes a massive scaling and speeding-up of renewable energy in power generation, industry, buildings and transport will accelerate our independence, give a boost to the green transition, and reduce prices over time.

New opportunities for Renewable Energy Communities through REPowerEU

A dedicated EU Solar Strategy to double solar photovoltaic capacity by 2025 and install 600 GW by 2030. Key actions relating to energy communities in this plan include:

- o The commission's ambition is to set up an Energy Communities Facility to provide cascade funding to energy community projects in the EU, under the LIFE programme.
- o EU and member states working together to set-up at least one renewables-based energy community in every municipality with a population higher than 10,000 by 2025.

A Solar Rooftop Initiative with a phased-in legal obligation to install solar panels on new public and commercial buildings and new residential buildings.

Doubling of the rate of deployment of heat pumps, and measures to integrate geothermal and solar thermal energy in modernised district and communal heating systems.

A Commission Recommendation to tackle slow and complex permitting for major renewable projects, and a targeted amendment to the Renewable Energy Directive to recognise renewable energy as an overriding public interest.

Setting a target of 10 million tonnes of domestic renewable hydrogen production and 10 million tonnes of imports by 2030, to replace natural gas, coal and oil in hard-to-decarbonise industries and transport sectors.

A Biomethane Action Plan sets out tools including a new Biomethane Industrial Alliance and financial incentives to increase production to 35bcm by 2030, including through the Common Agricultural Policy.

Under this plan it is suggested that Horizon Europe funding should be increased by reallocating resources freed up by non-participation of UK partners in the next calls to new biomethane topics (e.g. unlocking community energy potential to support market uptake of biomethane).

Delivering the REPowerEU objectives requires an additional investment of €210 billion between now and 2027. On 18 May 2022, the Commission adopted, as part of the REPowerEU plan, a proposal to amend the Renewable Energy Directive (REDII) on the promotion of the use of energy from renewable sources, the Energy Efficiency Directive, and the Energy Performance of Buildings

¹⁵ [REPowerEU: affordable, secure and sustainable energy for Europe](#) | EU, 2022

Directive in order to accelerate the clean energy transition and increase energy efficiency. It is expected that it will be fully adopted by the end of 2022.

The European Parliament and the Council are currently working towards the adoption of the revised REDII. The rising cost of energy and the situation in Ukraine has expedited this work. In the context of this report, RED provides two key provisions with regards to supporting the particular financing needs of developing and established renewable energy communities (RECs):

1. Member States are required to develop an enabling framework to promote and facilitate the development of RECs which ensure, among many other things, that: “[...] *tools to facilitate access to finance and information are available.*” The goal of this rule is to reduce risk for people investing in renewable energy projects. Many groups also don't know where to start when it comes to the technical and financial parts of setting up an EC, so having access to the initial capital to pay for pre-development (like feasibility studies, permits, legal agreements, etc.) is very important.
2. Second, Member States are required to take into account the unique needs of renewable energy communities when making support schemes. This is so that renewable energy communities can compete for support on the same level as other market participants. This provision doesn't mean that Member States have to create a scheme to support renewable energy, but it does mean that existing schemes have to be modified so that RECs can use them on the same terms as other, bigger market players.

RED II was put in place in 2019 as part of the Clean Energy for All package (CEP), a set of energy policies meant to move the EU away from infrastructure that relies on fossil fuels and toward a system that can meet the goals of the Paris Agreement.

The Internal Electricity Market Directive (IEMD)

The European Commission also recognises that the market must provide the right incentives for consumers to become more active and to contribute to keeping the electricity system stable. The Internal Electricity Market Directive (IEMD) aims to facilitate this market transition for what it calls ‘citizen energy communities’ (CECs). In brief, these are defined as legal entities based on voluntary and open participation, with the primary purpose to provide environmental, economic, or social community benefits through the provision of energy services.

Renewable Energy Communities (REC) and Citizen Energy Communities (CEC)

There are some notable differences across the EU in the definition of “Renewable Energy Communities (REC)” and “Citizen Energy Communities (CEC)”. In some senses, CECs can be more broadly interpreted - CECs have no geographical or technological restrictions whereas members of an REC must have geographical proximity to the source of renewable energy produced. Despite these differences, the definitions do have some overlap, shown below, and both RECs and CECs are intended to reflect a particular way to organise collective ownership around different energy-related activities through a legal entity that follows ownership and governance principles and has a non-commercial purpose.



Renewable Energy Communities (RECs)

- ✓ Promotion of RES
- ✓ Favorable conditions for RES support
- ✓ Strict governance and participation criteria
- ✓ Geographical proximity

Citizen Energy Communities (CECs)

- ✓ Recognition as a market actor
- ✓ Ensure level playing field and non-discrimination
- ✓ Strict governance criteria, but open membership
- ✓ No geographical proximity

Source: European Commission (2021) "Clean Energy Package – Legal Framework for Renewables Self-Consumption" (Powerpoint presentation), *Workshop on renewables self-consumption*, p.10.

Policy in Ireland

As more smart metres are installed in Ireland, people will have more chances to learn about how much energy they use and how it affects the electricity grid as a whole. Their active use of energy can help them figure out where the energy they use comes from and give them the chance to use greener, cheaper electricity at different times of the day or in different weather. This knowledge can then be put into action by an individual or a group of individuals who have come together to form an energy community and want to do more to help their local area reduce carbon emissions.

Energy Communities and Active Consumers

In 2021, the Commission for Regulation of Utilities (CRU) held a consultation on Energy Communities and Active Consumers¹⁶ to introduce a regulatory framework that will make it easier for active consumers and energy communities to get involved in the electricity sector. This process aims to consolidate the concepts presented in the Directives to address similar topics in single workstreams. This led to the development of the term 'active consumer' which combines the terms 'active customer' from IMED and 'renewable self-consumer' from RED II.

Active Consumer: an individual who

- generates renewable energy for their own consumption, or
- sells or stores excess generated electricity, or
- participates in energy efficiency schemes, or
- provides flexibility services,

provided these activities are not their primary profession.

Similarly, the concepts of 'Citizen Energy Community' (CEC) from IMED and 'Renewable Energy Community' (REC) from REDII were combined into a single workstream under the term 'Energy Community' which is defined below.

¹⁶ [Commission for Regulation of Utilities](#) (CRU), 2021

Energy Community: a group of active consumers, who voluntarily commit to providing environmental, social, or economic welfare by engaging in

- renewable energy generation,
- energy sharing or trading,
- storage, or
- supply,

provided these activities are not for commercial purposes and do not constitute the primary profession of the members of the community.

Ireland has a strong network of Sustainable Energy Communities (SECs) that work together through the SEC Programme of the Sustainable Energy Authority of Ireland. But the Directives' ideas about energy communities show a different model than the SECs that are already in place. Under the Clean Energy for all Europeans Package (CEP), energy communities would be encouraged to take part in certain energy activities that would help Ireland use more renewable energy. This may include:

- **Generation:** consumers should be able to produce renewable electricity for self-consumption. For example, this could include installing solar PV panels on rooftops, or installing a small wind turbine that provides energy to community members;
- **Supply:** consumers should be able to sell electricity from individually owned or community owned generation assets. Additionally, in selling this electricity, consumers should be remunerated for excess electricity supplied to the grid;
- **Storage:** consumers should be able to own an energy storage unit and not be faced with barriers while connecting to the grid;
- **Sharing:** members of a community or jointly acting active consumers located in the same apartment building or complex should be able to share self-produced electricity
- **Trading:** consumers should be able to participate in peer-to-peer trading arrangements; and
- **Flexibility and Demand response:** consumers should be able to provide services to the distribution system operators to provide flexibility to the grid. This could involve avoiding using large appliances at times of peak demand or turning off appliances when notifications are received that there is congestion on the grid.

Energy communities and active consumers can do these things on their own or with the help of an aggregator, which is a company that pools the loads of its customers and acts on their behalf in the electricity markets. Communities can also hire a third party to set up, run, or take care of their renewable energy project. Using aggregators and third parties should make it easier for people outside of the industry who want to help add more renewable energy to the system to do so. The new framework will take time and further consultation to fully develop, but once completed, it should be flexible enough to allow participation in all forms of energy activities by active consumers and energy communities.

Climate Action Plan 2021

The Climate Action Plan 2021¹⁷ is the cornerstone of climate action in Ireland. It recognises that the “science is indisputable and the effects of climate change are already clear.” It calls for action across the whole of society with sectoral targets, detailed in Table.1 below, highlighting the scale of the transformation required.

Sector	2018 Emissions (Megatonnes of CO2 equivalent)	2030 target Emissions (Megatonnes of CO2 equivalent)	% Reduction relative to 2018
Electricity	10.5	2 - 4	62 - 81%
Transport	12	6 - 7	42 - 50%
Built environment	9.0	4 - 5	44 - 56%
Industry	8.5	5 - 6	29 - 41%
Agriculture	23.0	16 - 18	22 - 30%
Land use, land use change, Forestry & Marine	4.8	2 - 3	37 - 58%
Unallocated Savings	N/A	4	N/A

Table 1 – Summary of the sectoral targets within the Climate Action Plan

The plan includes around 500 initiatives spanning all sectors of society. Highlights include the renovation of 500,000 homes to BER B2 standards by 2030, installation of 400,000 heat pumps to replace fossil fuel boilers, increasing the cost of emissions for industry, and reducing chemical nitrogen usage on farms by 20%.

To reflect the urgency of the transition the Climate Action Plan was further updated in 2023 with notable changes¹⁸ including:

- **Electricity:** CAP23 commits to 22GW of new renewable capacity by 2030, a very significant rise from 15GW in CAP21. An additional 22GW by 2030 would represent a five-fold increase of current renewable capacity.
- **Built Environment:** The residential sector will publish a National Heat Policy Statement, speed up district heating schemes, implement District Heating Steering Group's recommendations, and publish a geothermal policy statement. The commercial sector will develop a roadmap for long-term decarbonisation, while the public sector will collect data for a Public Sector Building Stock Plan and apply retrofitting through the Public Sector Pathfinder Programme.

¹⁷ [Climate Action Plan](#) | Department of the Environment, Climate and Communications, 2021

¹⁸ [Climate Action Plan 2023](#) | Arthur Cox Summary Report

- **Agriculture:** One of the primary objectives for 2030 is to increase the production of agri-centric biomethane to 5.7 TWh/annum, which is a significant increase from the 1.6 TWh produced in CAP21. To achieve this, it's projected that 150 to 200 AD plants of scale will need to be built. As part of the plan, 15 actions have been identified for 2023, which includes the development of a National Biomethane Strategy.

A Just Transition

Given the scale of these reductions, the Climate Action Plan recognises that some industries will be more affected than others. To compensate, support measures will need to be put in place to ensure the transition is just and inclusive. This aligns with the objectives of the European Green Deal and the United Nations' Sustainable Development Goals which advocates for the participation of citizens and communities in the energy transition through a bottom-up implementation of sustainable energy initiatives. The IPCC¹⁹ also recognises equity and justice as crucial issues for effective climate policy and support for deep decarbonisation. If concerns of equity and justice are not addressed, social cohesion and stability may be undermined.

A Just Transition Commission will be established in Ireland to assist the government in developing policy in this area. All future increases in carbon tax receipts totaling €9.5 billion are set aside for targeted social protection measures, an extension of retrofitting, particularly for social and low-income houses, and agri-environment projects.

Sinead Mercier²⁰, in her analysis of just transition case studies around the world, identifies 11 key lessons that should be considered as part of any transition process. This includes a deeper understanding of the complexities of these processes, as well as the need for time and careful planning led by the government or local community stakeholders with government involvement.

State support is critical, but there is no "one-size-fits-all" solution, and financial assistance alone will not suffice; the issue needs a lengthy process of thought, care, and trust among all stakeholders. Again, this highlights the significance of context, experience, and new institutional frameworks for flexible and inclusive social dialogue.

Instead of focusing only on directly impacted employees and businesses, place-based initiatives with an overall emphasis on regional development should be adopted. For example, skills audits, cultivating a region's capabilities, and personnel restructuring procedures in businesses may all promote an orderly phase-out for employees and contribute to the sustainable development of a region.

In Ireland, a just transition has primarily been viewed as a labour-oriented concept with the main focus on projects in the Midlands aimed at mitigating the impact caused by the region's closures of peat-fired power stations. However, this scope has been broadened somewhat with the launch of a draft territorial Just Transition Plan for the Midlands in December 2021 which "provisionally identifies

¹⁹ [Climate Change 2022: Mitigation of Climate Change](#) | IPCC

²⁰ [Four Case Studies on Just Transition: Lessons for Ireland](#) | Sinead Mercier, 2020 |

East Galway, North Tipperary, Longford, Laois, Offaly, Westmeath, West Kildare and Roscommon as the territories to be targeted."²¹

These national plans are funded at an EU level through a **just transition mechanism** to provide financial and technical support to the regions most affected by the move towards a low-carbon economy. It will help mobilise at least €65-75 billion over the period 2021-2027. With an overall budget of €17.5 billion, the **Just Transition Fund** is the first pillar of the mechanism. It provides tailored support to alleviate the social and economic costs resulting from the green transition for regions dependent on fossil fuels and high-emission industries. It supports investment in:

- SMEs and new firms
- research and innovation
- clean energy technologies and emissions reduction
- reskilling of workers and job-search assistance

The Climate Action Plan recognises that a *“just transition can, therefore, refer both to the broader policy framework of climate action to support individuals and communities in the transition, as well as the process of ensuring that individuals and communities have a voice and a role in informing and shaping these supports.”*

While many of the direct supports are targeted at regions in the midlands, the lessons learned will be applied on a nationwide scale. The Climate Action Plan cites various examples of how climate issues have influenced other government policies. These include:

- Provision of 100% grant funding for retrofitting to lower income households under the Warmer Homes Scheme.
- Commitment to a new Connecting Ireland Rural Mobility Plan to reduce our reliance on private cars.
- Establishment of a 'Future of Farming in Ireland' Dialogue under the Ag-Climate Roadmap for the agriculture sector
- Integration of just transition into our national rural development policy, Our Rural Future, as an essential building block to achieve a sustainable, resilient and climate neutral economy and society.
- Inclusion of climate change and just transition actions and associated themes in the new Social Inclusion and Community Activation Programme (SICAP), and support for the provision of training and capacity building in relation to climate change with a focus on just transition, social inclusion and anti-poverty for Local Community Development Committees and Local Development Companies.
- Integration of community participation mechanisms in the Renewable Electricity Support Scheme (RESS).

²¹ [Territorial Just Transition Plan](#) | Dept. of the Environment, Climate and Communications, 2021

Renewable Electricity Support Scheme (RESS)

This scheme, which will be characterised by a series of auctions, will help deliver Ireland’s contribution to the EU-wide binding renewable energy targets. The three main objectives of the scheme are to deliver Ireland’s renewable electricity ambitions to 2030, community ownership and partnerships, and increased renewable technology diversity.

RESS includes a Community Enabling Framework²² that provides extensive support for establishing and sustaining a community energy sector in Ireland. The Inishowen SEC is currently using these supports to assess their generation ambitions, with more detailed analysis of their progress in the next section of the document.



Figure.6: Overview of policy documents

²² SEAI [Community Enabling Framework](#)

THE VISION

By 2033, the Inishowen Peninsula will have transformed into an inspiring, self-sustaining community. It will be renowned for its innovative, participatory, inclusive, and resilient spirit, achieved by integrating social well-being, environmental protection, and economic prosperity.

This vision will come to life through collaboration that identifies new opportunities and creates social businesses across the region. The transformation will be driven by the unique cultural identity and history of Inishowen, serving as a model sustainable community for others to follow.

When considering how Inishowen SEC could evolve to deliver on their strategic intent, a key consideration was the current pace of change at both a national and EU level. Locking in a 10 or even 5 year plan right now risks relative obsolescence within a short space of time. Green and just transitions are complex processes that require a flexible and adaptive approach to ensure it can respond to the various challenges that arise along the way.

However, it is also necessary to identify goals and work with a clear direction and focus in the short term, and the flexibility and adaptability needed to succeed over the long term. The strategic focus of this document is a hybrid approach between deliberate strategy in the short term while also giving space for an emergent strategy in the longer term as visualised in Figure 7.

Emergent strategies are based on the idea that solutions to complex problems emerge over time through experimentation and learning. They are grounded in the principles of complexity theory, which suggests that complex systems cannot be fully understood or controlled through predetermined plans or strategies. Instead, they must be managed through a process of continuous adaptation and learning. Emergent strategies are often characterised by flexibility, responsiveness, and an ability to adapt to changing circumstances.

Deliberate strategies, on the other hand, are based on the idea that there are multiple ways to achieve a particular goal and that different approaches should be explored simultaneously. Deliberate strategies involve a more structured and planned approach to problem-solving, where the objective is to achieve specific outcomes within a defined time frame. They are often characterised by a clear focus on goals, a well-defined plan of action, and a systematic approach to execution.

Deliberate and Emergent Strategy

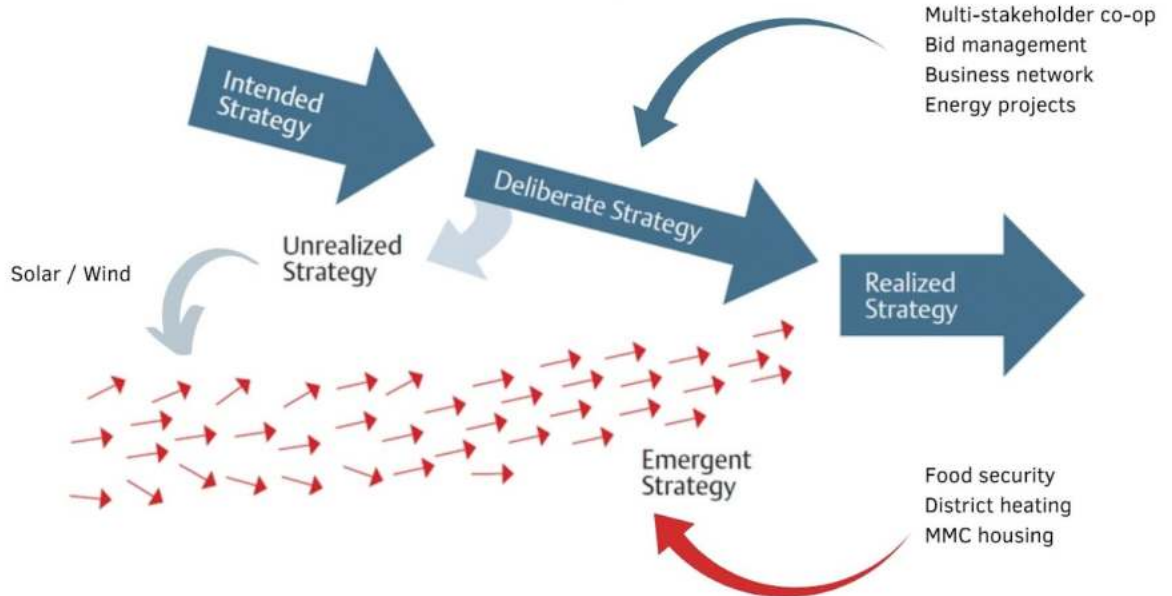


Figure.7: Adapted from Of Strategies, Deliberate and Emergent by Mintzberg, 1985²³

By using a combination of deliberate and emergent strategies, the Inishowen SEC can achieve the best of both worlds - a clear direction and focus in the short term, and the flexibility and adaptability needed to succeed over the long term. The governance/business models, actions, and training resources in this plan aim to strike a balance between the two and to remain open to new ideas and opportunities as they arise.

²³ [Of Strategies, Deliberate and Emergent](#) | Mintzberg, 1985

Governance Model

In line with the flexible and adaptable strategy detailed above it is proposed that **the Inishowen SEC organise as a multi-stakeholder cooperative** in order to successfully implement the actions in this strategic plan. Multi-stakeholder cooperatives allow for governance by representatives of two or more "stakeholder" groups within the same organisation, such as consumers, producers, workers, volunteers, or general community supporters.

A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.

—International Cooperative Alliance

Figure.8: Overview of cooperatives

The common mission is the central organising principle of a multi-stakeholder cooperative, which is often broader than the type of mission statement required to capture the interests of only one stakeholder group and is also representative of sustainability projects which stretch across multiple domains.

It requires all members to look beyond their immediate short-term interests and join with their business partners to envision a system where everyone's interests will be met in different ways over the short-term and the long-term²⁴. Consciously choosing to focus on commonalities rather than differences.

Multi-stakeholder cooperatives represent an alternative to traditional price-driven businesses, by operating across long horizons of time and prioritising fair pricing, fair wages and fair treatment for all parties involved. Situated in local communities, these organisations promote transformational practices that foster long-lasting relationships, rather than focusing solely on short-term financial gains like their for-profit counterparts.

While traditional businesses prioritise exports, growth, and the short-term expectations of shareholders, multi-stakeholder cooperatives value their members, leading to more equitable distribution of profits and a stronger sense of community. With a more democratic and socially responsible approach, multi-stakeholder cooperatives are gaining traction as a viable model for sustainable development and community-based business.

This can be seen in the growing network of 1,900 European energy cooperatives and their 1,250,000 citizens who are active in the energy transition. Analysis of these EU-based Renewable Energy Source cooperatives (REScoops) business and governance models²⁵ emphasises the need for citizens' involvement in the decision-making processes with room for multi-stakeholder engagement and social dialogue.

²⁴ [Solidarity as a Business Model](#) | A Multi-Stakeholder Cooperatives Manual, Kent State University; Page5

²⁵ REScoops | <https://www.rescoop.eu/>

It is also noted that these organisations share the cooperative values:

1. A voluntary and open membership that encourages multiple actors to the cooperative project, which can lead to multi-stakeholder governance structures and diverse skills and experiences, thereby enhancing the cooperative's social capital.
2. Implementing democratic decision-making procedures (typically on the basis of 'one person, one vote') and acknowledging the equality and potential contribution of each to the project are all part of democratic member control.
3. Economic engagement by members involves a certain financial relationship between the cooperative and its members, which influences the financing mix.
4. Autonomy and independence do not prevent collaboration, but rather validate the need to stay autonomous, particularly from political authorities.
5. The emphasis on education, training and information involves setting-up of transparent procedures and stresses the importance of educating the members, but also the community, on the issues relevant to cooperatives.
6. The cooperation among cooperatives fosters partnerships with other actors sharing the same philosophy.
7. The concern for community implies a mission that goes beyond the sole production and distribution of energy to turn its focus to benefits to the community and a just transition.

REScoop includes nine members from Ireland and presents a natural point of collaboration of the Inishowen SEC to access finance through the EU as outlined in the funding and clustering sections of this document. Cooperatives have a long history in Ireland, dating back to the 19th century when agricultural cooperatives were first established. In the 20th century, the cooperative movement in Ireland expanded beyond agriculture to include consumer and worker cooperatives including the Inishowen Cooperative Society who are a key partner and supporter of the Inishowen SEC.

Existing legislation on cooperatives in Ireland is outdated, but the Government recently agreed to draft a new Co-Operative Societies Bill 2022²⁶. The bill will modernise and consolidate existing legislation, making it easier to set up and operate a cooperative society, with changes including:

- The minimum number of persons required to form a co-operative will be reduced from 7 to 3.
- A body corporate can now be a founding member of a co-operative.
- The Bill allows a co-operative to carry out any (lawful) activity in the State based on the co-operative principles set out in the Bill. This change will make it easier to form a co-operative creating a level playing field with companies.

²⁶ [General Scheme of the Co-Operative Societies Bill 2022](#) | William Fry Review

- Audit exemptions will be available to co-operatives, which will reduce the administrative burden on smaller cooperatives.
- Cooperatives will be able to hold general meetings on a hybrid basis or on an entirely virtual basis.

These updates to the legislation will provide essential guidance on the rules that need to be addressed when creating and running co-operatives, laying out the minimum requirements without being overly prescriptive. The flexibility will allow co-operatives to create rules tailored to their individual circumstances, whilst also allowing them freedom to add rules that reflect their mission and values. This is a step forward when it comes to enabling and encouraging organisations, such as the SEC, to organise as a multi-stakeholder cooperative fit to respond to the needs of the community in an uncertain and rapidly changing environment.

The governance model outlined here is a crucial component of the overall strategic direction of the project. It is distinct from the business models detailed below. It is necessary for the Inishowen SEC to incorporate as a multi-stakeholder cooperative to put in place decision-making processes, roles and responsibilities of various stakeholders, and the rules and policies that guide the organisation's actions.

On the other hand, a business model refers to the specific approach or plan that an organisation uses to create, deliver, and capture value. It describes how an organisation creates products or services, delivers them to customers, and generates revenue. A business model typically includes elements such as target customers, revenue streams, key activities, partnerships, and cost structure.

As a community-led organisation the rules and policies of the organisation should be flexible to support many different forms of business to feed into the overall network. The next section of the document assesses the energy potential of the region before recommending a catalyst project that the Inishowen SEC is best placed to pursue at this time. Following that the document will discuss business plans in more depth.

Assessing the Energy Potential of Inishowen

The Energy Masterplan for Inishowen was the first step in identifying the sustainable energy potential of the region. The Inishowen SEC has made further progress since the publication of that document by working through the register of opportunities and availing of further support from SEAI to investigate the potential of a number of clean energy projects.

Four ongoing projects were identified and assessed during the course of the project, which not only address all four strategic objectives and priorities for the region but that also have the potential to accelerate the move towards the Inishowen SEC's overarching vision for the region. These projects are:

1. Community-led Biogas Power Plant for Electricity and Heating Generation
2. Community-led PV Farm for Electricity Generation
3. Community-led Onshore Wind Farm for Electricity Generation
4. Retrofitting of Commercial and Social Services Buildings

Based on assessment of the energy potential in the region the team carried a more extensive feasibility study for **Project 1: Community-led Biogas Power Plant for Electricity and Heating Generation** as it was recognised as having the most potential to act as a catalyst and demonstrate the feasibility and potential of community-led energy initiatives in the region. A catalyst project can play a critical role in driving the wider strategic direction of the community energy initiative, and may be seen as a key stepping stone towards achieving longer-term goals and objectives.

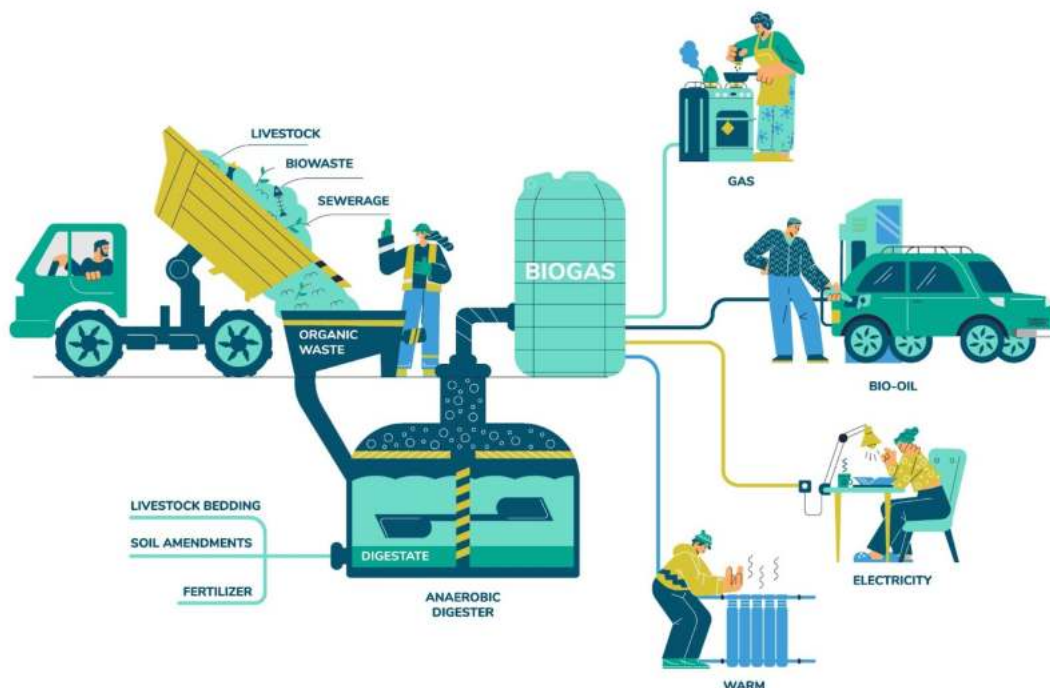


Figure.9: Community-led Biogas Power Plant for Electricity and Heating Generation

The Energy Master Plan for Inishowen focused on solar and wind energy projects in the region. This REISS-funded project focused its efforts on a community-owned biogas power plant to establish the possibility of transforming local waste into valuable resources. Collecting waste from households, farms, and industries reduces landfill waste and greenhouse gas emissions. The waste is processed through anaerobic digestion, generating biogas and nutrient-rich digestate.

This biogas, once purified, can produce electricity and heat or be upgraded to biomethane for fuel. The digestate serves as an eco-friendly fertiliser, enhancing agriculture while reducing the need for chemicals. This project could create local employment opportunities in waste collection, plant operation, and maintenance. Businesses can also benefit from utilising the energy, heat, or bio-fertiliser produced. As the plant is community-owned, profits can be reinvested locally to further equitable economic growth.

Furthermore, the biogas plant could serve as an educational platform, engaging the community in sustainable waste management and renewable energy practices. This would foster a sense of collective responsibility and pride in contributing to a greener future. In essence, the community-owned biogas plant promises social, economic, and environmental regeneration. By embracing this initiative, the community of Inishowen can create a cleaner, more resilient, and economically vibrant area for current and future generations. By harnessing waste as a resource, the community can transition towards a sustainable, circular economy, enhancing overall well-being and environmental stewardship.

This particular project was chosen for the following reasons:

- **Sectoral targets:** it can be argued that the farming community is facing more challenges than most when it comes to meeting sectoral targets. This project showcases integrative solutions that can serve as a means of reducing agriculture's impact on climate change, as well as contributing to the financial security of this community.
- **GHG reduction:** the biogas process results not only in the reduction of carbon dioxide carbon (CO₂) emissions but also in methane CH₄, which would otherwise escape from landfills or manure deposits. Using this methane as a fuel dramatically reduces its climate impact by converting it into “natural CO₂”
- **Circular economy:** this is a project which is based on circular economy principles, which not only utilises a renewable source of energy, but transforms “by-products” that were considered waste, into energy.
- **Multi-Purpose:** this project not only contributes to the generation of electricity and heat but also contributes to the production of a digestive that can be used as “biofertilizer”, and biomethane that can be used as a renewable source of gas, fuel of vehicles, and other by-products.
- **Revenue streams:** this type of project has the potential to generate several different by-products and therefore has the potential to propel different streams of revenue or

further potential spin-off businesses, such as selling “biofertilizer” or feedstock supply management.

The project holds immense potential to drive transformative change at the community level in a rural region such as the Inishowen peninsula. This could greatly benefit the growth of the Inishowen Peninsula as a centre of excellence in developing sustainable and self-sufficient solutions that contribute to the region's decarbonization.

A comprehensive feasibility study on the potential of a community-led biogas power plant for electricity and heating generation accompanies this strategic plan. The tables below provide an overview of the community energy potential in the region. They list specific elements for consideration to mobilise each project type, including potential challenges, costs, key stakeholders, ROI and impacts.

Each of the projects are at various stages of development and the Inishowen SEC will continue to build capacity of their network while responding to new opportunities as they arise.

PROJECT 1

Project Name	PROJECT 1: Community-led Biogas Power Plant for Electricity and Heating Generation
Degree of Relevance for ISEC Vision and Strategic Goals	Strategic Objective 1 - Very relevant Strategic Objective 2 - Very very relevant Strategic Objective 3 - Very relevant Strategic Objective 4 - Relevant
Aim & Scope	The aim of this “catalyst” project is to produce biogas from the anaerobic digestion of agricultural and non-agricultural feedstock, for electricity and heating generation. It involves the implementation of an initial-medium scale (500 kW) biogas plant (1st phase), potentially evolving to 1 MW in a 2nd phase. This project takes into consideration the circular economy, by using organic waste combined with agricultural by-products and other non-agricultural feedstocks, which can be turned into a high-quality fuel – biofuel. Once implemented, this project would be led by the Inishowen community members, more specifically by farmers.
Potential Location	Carndonagh (a more specific location is under consideration)
Main Stakeholders	<p><u>ISEC</u>; Community Champion; Farmers; Fishermans; Inishowen Co-Op; SEAI; Gas Network Ireland; EirGrid; Derry City & Strabane District Council and Donegal County Council; North-West Regional Energy Agency; Western Development Commission; Teagasc; DAFF Climate Change and Bioenergy Policy Division.</p> <p><u>Potential Irish Partners</u>: IrBEA - Irish Bioenergy Association, Technology Center for Biorefining and BioEnergy (TCBB), Dairy Processing Technology Centre of the Limerick University, Community Power (CRES), Energy Community Tipperary Cooperative, Aran Islands Energy Cooperative, Tait House Community Enterprise, Claremorris and Western District Energy Cooperative.</p> <p><u>Potential EU Partners</u> (mainly for EU Funding projects): Stichting Duurzame Projecten Loenen (DPL (Netherlands), EnerGent (Belgium), Gemeente Apeldoorn (Netherlands), Kamp C (Belgium), RESCoop.eu (Germany).</p>
Main Beneficiaries	<ul style="list-style-type: none"> ● Feedstock suppliers, mainly farmers, restaurant owners, supermarket owners, fishermans, waste management operators; ● Residents and Hotel, Spa’s, intensive industrial consumers that can benefit from the produced electricity, heat, and gas. ● Farmers, municipalities, domestic farmers, and other potential consumers of organic fertiliser.

Main Challenges	<ul style="list-style-type: none"> → Lack of a viable gas grid connection (this issue is being studied by Gas Network Ireland). → Site topography and ground conditions, since the Inishowen peninsula has hills and an inclined topography.
Main Driving-forces	<ul style="list-style-type: none"> → Irish government targets for biogas/biomethane (biogas to make up 10% of Ireland's gas needs by 2030) → Support Scheme for Renewable Heat → Renewable Electricity Support Scheme (RESS)
Estimated Investment (CAPEX)	<p>3M€ (phase 1 - 500 kW) Plus 5M€ (phase 2 - 1,000 kW)</p>
Streams of Revenue	<p>The revenue model has the potential for several streams of income:</p> <ol style="list-style-type: none"> 1. selling electricity to the grid (feed-in-tariff) and also PPA agreements, for example with local business owners; 2. selling heat to a district heating distributor or build owners , 3. selling the biomethane in different forms: <ol style="list-style-type: none"> a. as gas to Gas Network Ireland, as fuel for transportation, b. as commercialised gas to compressed gas companies; c. or selling CO2 to gasified beverages industries (for example). <p>Additionally, by leveraging incremental activities related to agro-tourism developed there is an additional revenue stream from visits from tourists.</p>
Pay-back	<p>Approximately 8 years*</p> <p><i>*This number does consider all the potential revenue streams, only selling electricity to the grid (feed-in-tariff) and also PPA agreements with business owners (for example) and selling heat to a district heating distributor or build owners. Note: more details are provided in the full feasibility study.</i></p>
Main funding mechanisms	<p>Ireland Strategic Investment Fund (€1 billion for biogas projects). Horizon 2030 Bank loans from ethical banks, namely <i>Triodos Energy Transition Europe Fund</i>, <i>Triodos Impact Mixed Fund</i></p>

**Business &
Governance
model**

1. **Option 1** - The biogas power plant is owned by a small group of shareholders: the main capital investor (which could be feedstock supply business owners, as for example: farmers, supermarket business owners, hotel business owners, or fishermen), along with Inishowen SEC. In this model, Inishowen SEC shares are addressed as part of the payment for their coordination/facilitation services provided to the project. In this model the feedstock supply:
 - a) is ensured by a *Feedstock Suppliers Co-Op*, whose shareholders are feedstock suppliers (such as farmers, restaurant owners, supermarket owners, hotel owners). In this case the variations in the feedstock quality could be evaluated and a standardised price per tonne is established to be paid to the Co-Op.
 - b) is directly provided by each feedstock supplier, having the disadvantage of no existing standardised price.
2. **Option 2** - The biogas project is owned by an impact venture capital associated with an EPC contractor (biogas power plant technology supplier), owning shares according to their agreement. In this model, Inishowen SEC also owns shares as part of the payment for their coordination/facilitation services provided to the project. In this model the feedstock supply:
 - a) is ensured by a *Feedstock Suppliers Co-Op*, whose shareholders are feedstock suppliers (such as farmers, restaurant owners, supermarket owners, hotel owners). In this case the variations in the feedstock quality could be evaluated and a standardised price per tonne is established to be paid to the Co-Op.
 - b) is directly provided by each feedstock supplier, having the disadvantage of not existing a standardised price.
3. **Option 3** - Or the project be majorly owned by an already existing REC, such as CommunityPower.ie, whose capital invested is translated as shares (owning at least 51% of shares), along with the Inishowen SEC. In this model, Inishowen SEC's shares are addressed as part of the payment for their coordination/facilitation services provided to the project. In this model, the project can be considered as a community-led REC. In this model the feedstock supply:

	<p>a) is ensured by a <i>Feedstock Suppliers Co-Op</i>, whose shareholders are feedstock suppliers (such as farmers, restaurant owners, supermarket owners, hotel owners). In this case the variations in the feedstock quality could be evaluated and a standardised price per tonne is established to be paid to the Co-Op.</p> <p>b) is directly provided by each feedstock supplier, having the disadvantage of not existing a standardised price.</p>
ISEC's role	<ul style="list-style-type: none"> ● Engaging potential farmers to develop the project in a cooperative model ● Supporting all the due diligence processes necessary for project implementation (land rental or acquisition, gas and electricity grid connection) ● Supporting the completion of all the required licences and permits ● Training of the necessary skills related to biogas plant operation Coordinating the management of a learning living lab around the biogas plant ● Continuous measurement and evaluation of the project implementation
Positive impacts	<p><i>High environmental positive impact</i> - a significant contribution to CH₄ and CO₂ emissions reduction, more specifically 1,252 kgCO₂-eq/year for 500 kW CHP engine and 2,106 kgCO₂-eq/year for 1,000 kW CHP engine.</p> <p><i>Medium social positive impact</i> - contribution to the creation of 12 newly skilled FTEs²⁷ direct jobs. Also the potential of two spin-off businesses:</p> <ul style="list-style-type: none"> ● a biofertilizer company: a biofertilizer company whose purpose is to deliver the biofertilizer to farmers, municipalities, domestic farmers, and other potential consumers of organic fertiliser. ● a feedstock management company: to manage the supply of feedstock food waste, and fish waste from various sources. <p><i>High economic positive impact</i> - directly from the creation of new businesses, namely a biofertilizer company and a feedstock management company, as well as the potential to mobilise and enhance several complementary businesses, including agri-tourism.</p>
Negative impacts	<p>Medium environmental negative impact - it requires the occupation of a significant area of land, it requires the transportation of feedstock and other products and can produce some odours (even though there are contemplated measures to reduce them).</p>

²⁷ Full-time equivalent

Degree of difficulty to implement	Medium difficulty
Current Stage of Development	Feasibility study conclusion
Timeline	Medium-term (between 1.5 - 3 years to be in full operation)
Scalability & Incremental projects	<p>This project itself can scale in dimension as it can be upgraded to a CHP engine of bigger power capacity (1MW) in a 2nd stage of development, by increasing the use of agricultural feedstock, as well as the introduction of fish waste as feedstock, as well as other sources of organic waste. This project can trigger the existence of complementary businesses</p> <p>This project can trigger the development of complementary projects that serve as extra sources of income, such as agri-tourism activities that link the farms of the feedstock suppliers cooperative.</p> <p>This project can become a reference point among the community-led renewable energy projects, serving as a living lab of learning of the pros and cons, as well as challenges of implementing a biogas project.</p> <p>This project can also incrementally evolve to a community-based Virtual Power Plant (cVPP), which facilitates local community energy initiatives to aggregate distributed generation and flexibility through an Energy Management System (EMS) platform which models price changes, energy flows, and weather conditions, and thereby helps to solve the grid problems. To harness this potential incremental project, it is important to have a regulatory framework that enables the viability of cVPP business models, which is not the case at this moment. Nevertheless, it is helpful to have this in the pipeline and follow the project cVPP - Community-based Virtual Power Plant, funded by Interreg North-West Europe. See more details here.</p>
Associated documents	Pre-feasibility study elaborated by the Consortium composed of ConsortiaCo, and Amicitia where this and other topics are covered in more detail.

PROJECT 2	
Project Name	Community-led PV Farm for Electricity Generation
Degree of Relevance for ISEC Vision and Strategic Goals	Strategic Objective 1 - Relevant Strategic Objective 2 - Very relevant Strategic Objective 3 - Relevant Strategic Objective 4 - Relevant
Aim & Scope	The aim of this project is to produce electricity from a solar PV farm, which converts the sun's energy to electricity. This project corresponds to the 3 solar PV farms, of 5 MW power capacity each, which was the subject of a feasibility study in 2022. Once implemented, this project is to be led by the Inishowen community members, more specifically by residents, following the preferred structure of a community-led renewable energy project. Feasibility study has been carried out by Geosolutions.
Main Beneficiaries	Inishowen SEC and residents
Main Challenges	Proximity to the nearest grid node — i.e. the distance from the solar PV Farm location to the nearest EirGrid substation, and the available capacity to that node to accept the generation. Generally speaking, a 5 MW PV Solar Farm needs to be located within 1km of the substation and requires no upgrade to the substation/network in order to be viable. This has been the biggest constraint of this project, since at least one of the three PV solar projects is not viable. Site topography and ground conditions, since the Inishowen peninsula has hills and an inclined topography.
Main Driving-forces	Renewable Electricity Support Scheme (RESS)
Estimated Investment (CAPEX)	2M€ (for each 5MW solar PV Farm).
Streams of revenue	The revenue model is based on one stream of revenue: the fee paid for the electricity generated. The revenue could be very steady if the project is well-designed and installed. However, the models associated with PV solar farms (particularly those for smaller scale projects) are very sensitive to changes in certain model inputs.
ISEC's role	<ul style="list-style-type: none"> ● Engaging potential residents and other community members to develop the project, in a cooperative model; ● Supporting all the due diligence processes necessary for the project implementation (land rental or acquisition, grid connection) ● Supporting the completion of all the required licences and permits ● Upskilling in relation to solar PV farm operation ● Coordinating the management of a learning living lab around the PV solar farm

	<ul style="list-style-type: none"> ● Continuous measurement and evaluation of the project implementation.
Positive impacts	<p>Medium environmental positive impact - only contributes to the reduction of CO2 emissions, and does not contribute to CH4 emissions reduction, as compared with biogas projects</p> <p>Low social positive impact - only contributes to very few direct new jobs (2-3 direct jobs)</p> <p>Medium economic positive impact - the only revenue stream is from the fee paid for the electricity generated.</p>
Negative impacts	<p>Medium-high environmental negative impact - it requires the occupation of a significant area of land (20-30 acres per each 5MW project) if we take into consideration the life cycle of a solar PV plant, the environmental impact is high since PV cells require significant amounts of silica extraction (high natural resources depletion).</p>
Degree of difficulty to implement	<p>Medium difficulty</p>
Current Stage of Development	<p>Waiting for grid connection approval/viability.</p>
Timeline	<p>Medium-term (between 1.5 - 3 years to be in full operation)</p>
Associated documents	<p>Not applicable.</p>

PROJECT 3	
Project Name	Community-led Onshore Wind Farm for Electricity Generation
Degree of Relevance for ISEC Vision and Strategic Goals	Strategic Objective 1 - Relevant Strategic Objective 2 - Very relevant Strategic Objective 3 - Relevant Strategic Objective 4 - Relevant
Aim & Scope	The aim of this project is to produce electricity from a Wind farm, with an installed power capacity of 4,9 MW (2 turbines of 2,3 MW each), which was an object of a feasibility study elaborated in 2022. If implemented, this project is to be led by the Inishowen community members, more specifically by residents as a community-led renewable energy project.
Main Beneficiaries	Inishowen SEC and residents
Main Challenges	Proximity to the nearest grid node — i.e. the distance from the wind Farm location to the nearest EirGrid substation, and the available capacity to that node to accept the generation. Locating the project in the east of Bunrana is important due to its proximity to the substation that is being used by the Glenard Wind Farm (privately owned by FuturEnergy Ireland). Site topography and ground conditions, since the Inishowen peninsula has hills and an inclined topography.
Main Driving-forces	Renewable Electricity Support Scheme (RESS)
Streams of revenue	The revenue model is based on one stream of revenue: the fee paid for the electricity generated (feed-in-tariff).
ISEC's role	<ul style="list-style-type: none"> ● Engaging potential residents and other community members to develop the project, in a cooperative model ● Supporting all the due diligence processes necessary for the project implementation (land rental or acquisition, grid connection) ● Supporting the completion of all the required licences and permits, ● Upskilling in relation to wind farm operation ● Coordinating the management of a learning living lab around the wind farm ● Continuous measurement and evaluation of the project implementation.
Positive impacts	<p>Medium environmental positive impact - only contributes to the reduction of CO2 emissions, and does not contribute to CH4 emissions reduction, as compared with biogas projects</p> <p>Medium social positive impact - only contributes to very few direct new jobs (3-5 direct jobs)</p> <p>Medium economic positive impact - the only revenue stream is from the fee paid for the electricity generated.</p>

Negative impacts	Medium environmental negative impact - the main impact is visual impact and the impact that can have on wild birds (note: wind turbines are designed with systems to avoid bird collision)
Degree of difficulty to implement	Medium difficulty
Timeline	Medium-term (between 2,5 - 3 years to be in full operation)
Associated documents	Not applicable.

PROJECT 4	
Project Name	Retrofitting of Commercial and Social Services Buildings
Degree of Relevance for ISEC Vision and Strategic Goals	Strategic Objective 1 - Relevant Strategic Objective 2 - Very relevant Strategic Objective 3 - Relevant Strategic Objective 4 - Relevant
Aim & Scope	The aim of this catalyst project is to vastly improve nine existing commercial and social services of the Inishowen region, by upgrading multiple aspects of its structure and energy systems so that the buildings at least have an energy rating of B2. Addressing several buildings at once, and retrofitting them according to what was established in the Energy Master Plan, allows for more advantageous terms.
Main Stakeholders	<u>ISEC</u> ; Community Champion; Residents; SEAI; Derry City & Strabane District Council; Donegal County Council; North-West Regional Energy Agency; Western Development Commission.
Main Beneficiaries	Commercial and social services building owners and users namely: Buncrana Youth Centre, Sliabh Sneacht Centre, Spraoi Agus Sport, Scoil Cholmcille, Centra Buncrana, Scoil Naomh Treasa, Doherty' Newsagents, Greencastle Centre, Ferryport Bar.
Main Challenges	Funding the overall upgrading and building retrofitting.
Main Driving-forces	Ireland's National Retrofit Scheme
Estimated Investment (CAPEX)	€800k - this includes all the measures identified in the Energy Master Plan to all the above mentioned buildings so they perform an energy rating of B2 (minimum).
Streams of revenue	Not applicable. (Energy cost savings only)
Pay-back	5-10 years (as an estimated overall)
Main funding mechanisms	Ireland's National Retrofit Scheme.
ISEC's role	<ul style="list-style-type: none"> ● Engaging potential residents and other community members to develop the project, in a cooperative model; ● Supporting all the due diligence processes necessary for the project implementation (land rental or acquisition, grid connection) ● Supporting the completion of all the required licences and permits ● Upskilling in relation to solar PV farm operation ● Coordinating the management of a learning living lab around the solar PV farm ● Continuous measurement and evaluation of the project implementation
Positive impacts	Medium environmental positive impact - only contributes to the reduction of CO2 emissions

	<p>Medium social positive impact - only contributes to very few direct new jobs (3-5 direct jobs)</p> <p>Medium economic positive impact - it allows significant energy savings</p>
Negative impacts	No negative impact
Degree of difficulty to implement	Low difficulty
Timeline	Short-term (between 6 months - 1.5 years until all buildings are retrofitted)
Scalability and Incremental projects	This project can be scaled to other small (10-15) groups of buildings from different sectors, such as a group of public buildings, several groups of 10-15 residential buildings.
Associated documents	Not applicable.

Benchmarking Best Practice

Given the energy potential of the region it is necessary to introduce a dynamic and agile approach to business modelling and resource management. This can ensure that the organisation is best positioned to respond to changes in policy, legislation and the competitive landscape, while being able to capitalise on new projects and developments in the region.

“A cooperative should not be totalitarian . . . what the co-op members understand is if they work together they are stronger, so the legal framework can adapt to the activity and the vision.”

—Philippe Deblauwe, founder and Managing Director, Picturetank

In order to determine the optimal models of operation based on proven examples, a series of desk-based research activities were undertaken to explore the national and international landscape within sustainable and renewable energy communities. An analysis of three distinct layers of benchmarking was undertaken to align with the proposed strategic direction for future funding acquisition.

Ireland: An examination of the 700 strong SEAI Sustainable Energy Communities network to understand how communities in rural locations can best organise and coordinate among their locality. The study included a review of the 27 Donegal-based SECs to explore immediate areas of collaboration, collective action and peer development opportunities.

Northern Ireland: Analysis of the Northern Irish Community Energy (NICE) project under the remit of Sustainable NI to connect with counterparts across the border, understand best practices, align with policy and position for future engagement in funded programmes such as PEACE Plus and the Shared Island Fund.

European: A macro level assessment of the European landscape to understand best practices within existing Renewable Energy Communities and associated programmes. Through this assessment, key insights and actions were identified, leading to appropriate positioning for energy transition projects that align with ERDF, Horizon Europe and Just Transition Funding mechanisms.

The aim of this benchmarking exercise is to explore the current ‘*As Is state*’ of energy transition within the National and European context, while providing specific and targeted actions that will support Inishowen SEC in identifying the optimum operational model going forward.

Benchmarking Parameters

Within this benchmarking analysis, the following parameters were defined in order to extract the highest value outputs, insights and actions from the exercise:

- **Case Studies:** with specific examples relevant to the Inishowen SEC socio-economic profile and natural resource availability.
- **Market Actors:** defining the array of required stakeholders needed for successful energy transition.
- **Business Models:** examining potential commercial structures to support self-sustained growth and development.
- **Governance Models:** defining innovative structures for operational excellence, resourcing and project coordination in line with the governance model introduced above.

The following examples from local to international contexts provide insights into recent success stories within the sustainable and renewable energy communities network, supported by crucial insights and aligned with the proposed Inishowen SEC strategic roadmap.

Erris Sustainable Energy Community

Erris, located in the North West region of County Mayo, spans an area of 850 km² with a population of 10,000 people. It is a small rural area with substantial natural resource potential due to an abundance of wind, wave, solar, and seaweed, supported by a strong community. Since 2014, the SEC has undertaken targeted initiatives with community groups and resident homeowners utilising the available grant streams, retrofitting plans and adaptation of available technological enhancements.

Year	Projects completed
2014 14 Community Groups	2 electric vans for local "Meals on Wheels" 2 x 7kW Photovoltaic arrays 10 buildings insulated 9 buildings heating system upgrades 7 buildings LED lighting 28 Quantum storage Heaters
2015 10 Community Groups	Western Care (Adults with Intellectual Disabilities) 3 building upgraded Irish Wheelchair Association 11kW Photovoltaic array 6 National Schools retrofitted Micro grid incorporating 11 kW Photovoltaic, 6 kW battery, 3 x Glen Dimplex storage heaters
2016 50 home owners in energy poor homes	Doors and windows replaced LED lighting replacements Attic, cavity, internal and external insulation New heating systems Solar hot water systems €19,000 per year saved overall with an average of €380 per house

Figure.10: Overview of completed projects in Erris²⁸

Key Insights

A critical success factor of the Erris Sustainable Energy Community is the proactive engagement with the Mayo County Council to access and draw down on key available funding streams relative to the SEC's location, in combination with SEAI's Better Energy Communities grant schemes. Inishowen may replicate this collaborative approach with Local Authorities to access grant and funding opportunities specific to the location and socio-economic profile, such as PEACE Plus and Shared Island Funds, in collaboration with Donegal County Council as a resourced partner for funding acquisition.

The wider stakeholder group of collaborators within the Erris SEC includes local schools, community groups and Council members, and Údarás na Gaeltachta, SEAI and Retrofit Energy Ireland. With a strong base of local and national partners, the group was able to access multiple funding streams, including INTERREG funding, to drive the implementation of projects.

²⁸ Case study report for Ireland: [The Erris Community: Becoming an Sustainable Energy Community](#)

Comharchumann Fuinnimh Oileáin Árann Teoranta (CFOAT) | Aran Island Energy Co-Op

CFOAT operates a community based, not-for-profit Energy Cooperative representing the 3 Aran Islands, in County Galway with just under 100 shareholders and 12 elected directors. The group is managed by a full-time employee. The group's aims are to drive the transition on the Aran Islands to carbon neutrality, insulate all the buildings to a high standard, implement green technologies across the Islands and tap into the sources of green energy on the islands to become self-sufficient. The scope of activities and actions since establishing in 2012 include:

- Retrofitting 300 out of 500 homes across the Islands, including insulation, external wall insulation, heat pumps and solar PVs.
- Island wide transition to electric vehicles and sustainable mobility options.
- Collaboration with the University of Galway on hydrogen fuel scoping projects to power the ferries, fishing boats, and local transport sector.
- A strong stakeholder group dedicated to clean energy transition led by the CFOAT's full time manager and supported by key public sector actors including Údarás na Gaeltachta, Galway University and Atlantic Technological University.
- Development of a robust transition pathway connecting existing wave, wind and solar energy production systems with hydrogen storage, thermal and heat pumps to facilitate residential and commercial requirements.

Key Insights



CFOAT's collective action initiative brings stakeholders together from civil society, the private sector, local authorities and 3rd level education. With a shared vision for the Islands' future, the different groups can share resources, enhance impact through economies of scale, collaborate on multiple European Commission funding programmes and drive a culture of community-oriented action towards a carbon-neutral energy transition. Securing a full-time resourced manager to drive this initiative further contributes to the success of this model and the overall environmental & socio-economic impacts experienced by CFOAT.

Figure.11: CFOAT partner matrix

Dingle Hub | Dingle Peninsula 2030

The Dingle Peninsula covers an area of 583 km² with a resident population of 12,958. *Dingle Peninsula 2030* aims to establish a more environmentally and economically sustainable future by transitioning the Peninsula to a low carbon and resilient community. The SEC has established 5 Pillars of focus to achieve this ambition:

- **Energy**: with a focus on Anaerobic Digestion feasibility studies, utilising circular economic systems by repurposing organic wastes, agricultural by-products and feedstocks into biofuel, creating new economic opportunities for our local community.
- **Agriculture**: supported by a range of national and European funded programmes to drive innovative engagements with local farmers, including the Creative Climate Action fund where co-creative practices with the local farming community explored how farming can play an important role in acting on the climate emergency.
- **Marine**: driven by technological enhancements utilising Internet of Things (IOT) to monitor water quality in local harbours and mitigate negative environmental impacts, further supporting the general community, farmers, aquaculture businesses, local authority and state businesses.
- **Transport**: improving sustainable mobility around the peninsula through a number of initiatives facilitated by public sector engagement with Local Council and Transport Authorities and community groups, including usage of e-mobility, EV infrastructural development and transitioning public vehicles to low carbon emission alternatives.
- **Tourism**: developing a tourism sector specific energy master plan to guide local stakeholders, businesses and community members on a carbon reduction roadmap. The project aims to promote Dingle Peninsula as a sustainable tourist destination and an exemplar for other regions interested in sustainable tourism.

Key Insights

The impressive scope and scale of Dingle Peninsula 2030 demonstrates the importance of a regional-wide approach to the sustainable energy transition. Their 5-pillars of sustainable transition mentioned above cover the vast majority of social, economic and environmental impacts within the peninsula, allowing for a systems thinking and circular economic approach with novel technologies, digitalisation and alternative energy production at the core.

The successful engagement of the local farming community through co-creative practices and associated funding streams, as well as the adoption of technologies and digitalisation, has further enhanced Dingle Hub SEC's ability to create community-wide collective action.

Farming Carbon Northern Ireland

Farming Carbon is a framework developed in Northern Ireland to scale sustainable farming practices. The framework aims to help businesses and individuals invest in climate action while supporting farmers in transitioning to greener farming through Regenerative Agriculture. The framework demonstrates how targeted and coordinated planting of crops contributes to CO₂ sequestration and

reduction, enhances biodiversity benefits, and supports food security and rural economic development. Stakeholders of the programme include:

- **Communities of Farmers**, who are supported in targeted upskilling in regenerative farming practices.
- **Local Community Groups**, assisting with outreach and activation among youth and families.
- **Primary and Secondary Schools**, through sustainable awareness, food systems and climate action education campaigns.
- **Local Businesses**, supporting the programme to reach their sustainability goals and contributing to the communities that they serve.

Key Insights

With over 70% of the land in Northern Ireland dedicated to agriculture and the agri-food industry, the sector is the major contributor of greenhouse gases in the region. The community-focused Farming Carbon Initiative, based in County Down, explores behavioural change by connecting farmers with the youth and general community to stem negative environmental impacts while promoting a holistic approach to sustainable development and transition.

Integrating such programmes with the vast network of over 80 existing Anaerobic Digestion plants across Northern Ireland provides a unique solution for sustainable energy transition through a people-centric, educational and upskilling approach³. The potential for collaborative engagements with Farming Carbon on socially focused behavioural change, youth empowerment and sustainable themed activations provide a pathway for funding acquisition within the PEACE PLUS programme²⁹ across themes 1 to 6:

- Theme 1.4: Collaboration for reimagining communities
- Theme 2.1: Crossborder academic and industry collaborative projects
- Theme 3.1: Awareness-raising programmes of shared and integrated education
- Theme 4.2: Development of social farms for social and economic benefit
- Theme 5.1: Cross-border development and management of nature-based projects:
- Theme 6.1: Facilitate increased cross-border collaboration in key sectors including Business, Tourism, Environment and Energy

²⁹ [Peaceplus Programme 2021-2027 | Programme Overview](#)

BIOGAS³

BIOGAS³ is an EU backed programme that promotes the sustainable production of renewable energy from the biogas obtained from agricultural residues and food and beverage industry waste (agro-food waste) in small-scale concepts for energy self-sufficiency. This collective action contributes to secure, sustainable and competitively priced energy for Europe by promoting new and renewable energy sources and supporting energy diversification through a decentralised AD Network of micro producers.

10 European Partners are involved in the implementation of BIOGAS³ across 7 countries: Spain, Italy, France, Germany, Sweden, Poland and Ireland.



Figure.12: BIOGAS European Partners³⁰

Key Insights

IrBEA, the Irish Bioenergy Association, led a stakeholder interaction process with policy makers at the Department of Agriculture (DAFM) through the Animal By-Product (ABP) Regulations Forum to develop ABP regulations around farm scale digesters. The engagement has made significant progress in policy development to enable ABP rules to be established specifically for on-farm biogas plants using only on-farm material – avoiding the highly regulated ABP for industrial plants involving separation from farm and pasteurisation. The proposal was accepted and the DAFM drew up a / 27 IEE/13/477/SI2.675801 D1.4, simplifying regulation for on-farm plants.

BIOGAS³ demonstrates the opportunities for AD Energy in Ireland through changes in both national policy and European direction, enabling energy transition using close circuit circular decentralised networks of Anaerobic Digestion plants in a bid to achieve the EU target of 35 Billion cubic metres of natural gas annual production by 2030.

ISABEL

ISABEL is an Horizon backed EU project from 3 European locations: Yorkshire and the Humber (United Kingdom), Baden-Württemberg Lake Constance (Germany), and Central Macedonia (Greece). The

³⁰ [BIOGAS3](#)

project is aimed at increasing adaptation, production and consumption of sustainable bioenergy around Europe through engaging, triggering and supporting sustainable biogas energy communities. ISABEL enables communities and local stakeholders to participate in active roles in the planning and development of local sustainable biogas supply chains. Local community activation is achieved through expert knowledge sharing, community collaboration tools, proactive engagement with policy-makers & local authorities and a strategic and robust approach to funding acquisition. The project's unique success criteria include:

- The combination of community energy and social innovation by adopting a system's thinking approach to the energy transition.
- Positioning biogas as a “public good” by understanding and engaging prospective stakeholders and analysing perceptions towards biogas production and community biogas systems.
- Enabling the co-creation and coordination of regional self-organised biogas communities among local stakeholders and community actors.
- Establishing inclusive local governance models activated by social innovation metrics, public participation approaches, digital enablement and expert's guidance.
- Ensuring the expansion of its core notions and approaches as well as the replication of its outcomes to other European regions through the communication of the project's experience, success stories and practices and the support of their implementation in other contexts.

Key Insights

ISABEL focuses on the place-based societal relevance of biogas potential with a key focus on social innovation drivers associated with biogas energy transition. The programme undertook sophisticated community mapping, market research and stakeholder engagement to understand the needs and cultural diversities of the communities involved.

This fusion between social innovation and biogas potentiality transformed public opinion from an economic biofuel option to a mechanism for social good. The project demonstrates how community-based energy projects can spin-off self-sufficient, close-loop, energy economies through a sense of “common good”.

Critical Success Factors

Among the above examples of national and European community models for co-creative energy transition, a number of key concepts can be extracted that characterise successful projects. The below extract highlights critical success that should be considered and adopted where possible.

Systems Thinking Approach

Establishing a regional and community wide approach to energy transition by mapping, connecting and integrating social, environmental, economic and governance into a unified approach.

Multi-Level Stakeholder Engagement

Engaging actors from both the public and private sector to develop a wide stakeholder engagement base, enabling diversified funding strategy, commercialisation and decentralised governance structures.

Collective Action Initiatives

Activating community participation through knowledge sharing, co-creativity and inclusive public & private sector engagement to establish cohesion across all actors and stakeholders.

Proactive Policy Development

Coordinating placed-based regional & local policy development with local authorities, peers and legislators to facilitate sustainable energy and social transition that is aligned with European frameworks.

Social Innovation Cohesion

Combining the strengths of cross-sector participation to collectively tackle local and global issues that impacts on community livelihood, prosperity, health and wellbeing for the next decades to come.

Multi-stakeholder Governance Models

Initiating community based, self-sustaining governance models that provide a collaborative, multi-sector approach to managing energy transition with a resource effective approach.

The above section demonstrated a non-exhaustive selection of key attributes of successful community-led energy transition projects at EU level, providing an opportunity for organisations to align with European best practices and peer research, further enhancing the commercial opportunities to engage and acquire EU funding to drive sustainable transition and project implementation. Each of these projects demonstrate innovative approaches to project commercialisation, achieved through partner diversification. This allows for creation of dynamic business models and governance structures which can be fluid and reactive in response to changing socio-economic landscapes and market factors.

FUNDING THE MODEL

As referenced in Section 2, the EU's *Clean Energy for All* package in 2019 recognised for the first time in EU legislation, citizens' ability to participate in the production, storage and distribution of energy thereby setting in motion the proliferation of energy communities.

While there are a number of robust case studies to support the choice of appropriate governance and business models, deciding how to fund both the entity itself and the projects within it is not straightforward. Not only is there a lack of clear guidelines but by their nature, EC's are extremely diverse – adding to this complexity. According to *Friends of the Earth Europe*, Energy communities in the EU facing funding barriers;

- Are for the most part small, local and run by volunteers;
- Lack starting capital and technical/organisational capacity outside of the community; and
- Are structured and governed in ways that formalise collective decision-making.³¹

In order to overcome these limitations, Inishowen SEC can enhance their capabilities and strategic involvement with accessible public funding channels, identifying a feasible financing structure and growth model that can facilitate the sustainable expansion of the SEC.

The below section details the pathways available to the Inishowen SEC across public sector funding acquisition. The proposed funding strategy is split between two distinct tiers of commercial activity and engagement: European Grants and National Tenders.

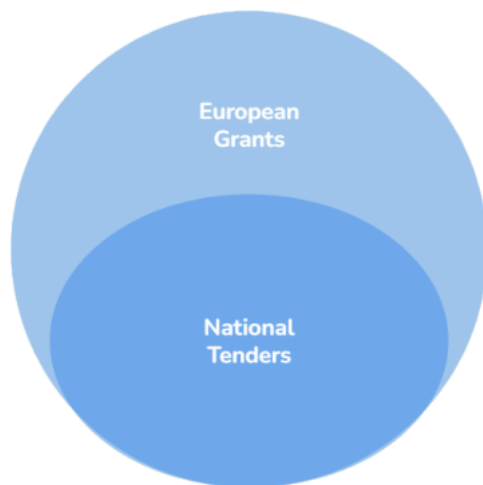


Figure.13: Two Tier Funding Strategy

Tier One will include European Grant Acquisition, engaging the likes of Horizon Europe, Just Transition Funding and other large grant programmes that operate across the European Single Market. Collaboration and peer development with European partners will be important to build momentum and success within this tier.

Tier Two will focus on National Tenders utilising the public procurement process whereby allocated funds from European Grants are distributed from central government to key public sector bodies and authorities. In turn, these funds are released through discrete work packages as requests for tender.

Inishowen SEC will be in position to maximise engagement with the above strategies by undergoing a comprehensive training programme which will prepare the management team to implement the

³¹ [Energy Communities in the EU | Opportunities and barriers to financing](#), October 2022; Page3

two-tier funding strategy from Q2 2023. The team is undergoing capacity development to upskill in key areas including Business to Government (B2G) Commercialisation, Peer to Peer Development (P2P) and Cluster Strategy.

The Cohesion Policy

The European Commission's *Cohesion Policy*³² is an integral part of the EU's funding strategy from 2021 to 2027. The policy is designed to promote economic, social, and territorial cohesion across the EU, and has specific remit of strengthening capacity for a transition to a green economy by supporting the regions that are the most vulnerable to climate change.

The Cohesion Policy is central to the European Union's strategic direction, decision making and implementation of associated policies. Understanding the context of the Cohesion Policy background and future trajectory towards 2030 and 2040 targets will be a critical success factor for implementation of the Inishowen Funding Strategy across both tiers, as the key principles direct and govern the allocation of funds across territorial, central, regional and local government. A thorough understanding of the Cohesion Policy and how it relates to the North West region's development will position Inishowen SEC appropriately to access and activate public funding, ensuring a diversification of revenue.

European Grant Strategy

Proactive engagement with European Commission (EC) grants and funding will form the basis of the Inishowen Public Sector strategy. Developing familiarity, organisational capacity and awareness of the current and forthcoming European grant programmes will provide invaluable insights for the Inishowen SEC team at a local and regional level. The EC Grant Strategy will be approached from 3 perspectives:

1. **Reactive Bidding:** Maintaining an overview of the European Funding Portal and identifying, qualifying and progressing suitable calls for proposals.
2. **Proactive Engagement:** Engaging partners and peers from existing programmes and funded initiatives to develop collaborations.
3. **Policy Alignment:** Tracking changes in European legislation and staying ahead of the curve in policy implementation in a national, regional and local context.

The below section highlights and analyses some of the available EC funding streams and programmes that Inishowen SEC can engage during 2023 and beyond. The stream analysis explores the overall programme, scope and key areas of alignment to support the Inishowen strategic roadmap.

³² EPRS | [The European Green Deal and cohesion policy briefing paper](#)

Special EU Programmes Body

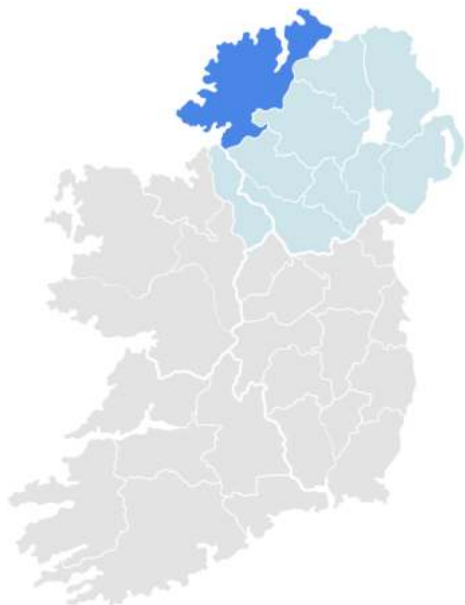


Figure.14: SEUPB Regions

The European Commission's Special EU Programmes Body (SEUPB) is a cross-border initiative which coordinates projects funded by the European Union and implemented in Northern Ireland and adjacent regions including the Border region of the Republic of Ireland and Western Scotland.

With over €1 billion allocated to the programme over the next 5 years, it aims to develop cross border cohesion through empowering communities, engaging youth, supporting sustainable enterprise development and activating socio-economic regeneration for sustainable growth.

The SEUPB provides a unique opportunity for Inishowen SEC to collaborate with partners across Northern Ireland by championing projects and initiatives that align with the SEUPB core 6 pillars that empower communities to transition to low carbon, circular economies and achieve Net Zero targets.



Figure 14: Peace Plus Themes³³

³³ [Peace Plus Themes](#)

Just Transition Fund

Under the European Commission Cohesion Policy a total of €372 billion has been ring fenced to promote and support the overall harmonious development of Member States³⁴ and regions by strengthening economic, social and territorial cohesion. A key mechanism of this policy is the the Just Transition Fund (JTF)

Key priorities of the Just Transition Fund include generating employment through diversification of the local economy, supporting the regeneration and repurposing of natural landscapes, and providing smart and sustainable solutions to local communities. The fund will directly support individuals through the green transition, creating unique opportunities for commercial and regional development through adaptation of new models for sustainable community development.

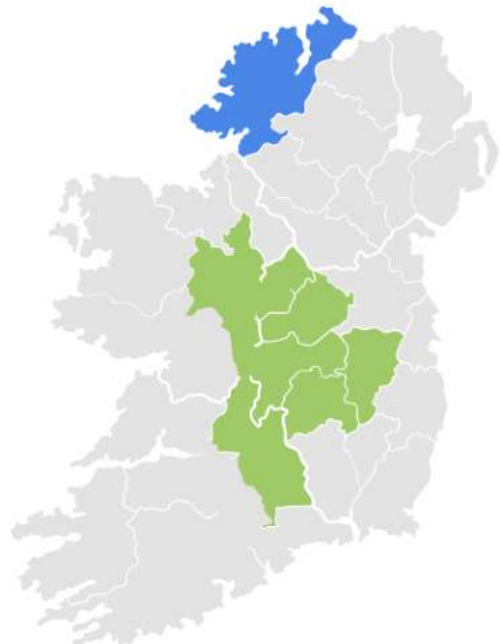


Figure.15: Just Transition Regions

Through collaboration, strategic cross-cluster activities and consortium development with local & national partners, up to €190 million will be available directly from the Irish Government to fund cohesive projects that align with the Green and Just Transition. Working in tandem with fellow Energy Communities across the country, Inishowen SEC will be able to activate this funding stream to develop capacity among SEC members and drive a collective action towards a green and just energy transition.

A further strategic opportunity exists to tap into additional JTF funding through trans-national development initiatives that will support the Inishowen Sustainable Energy Community by stimulating the local and regional landscape through EC consortia development. Proactive engagement on Just Transition calls via the EC Cluster and Partner Development platforms will provide access to and activation for these opportunities, while building a community of European partners.

³⁴ [The InvestEU Programme](#)

European Regional Development Fund

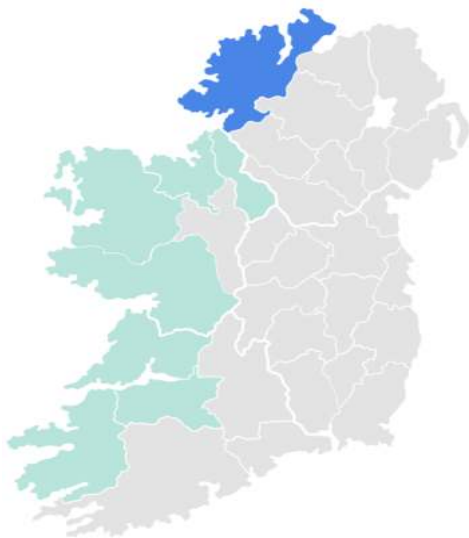


Figure.16: European Regional Development Fund Map

The 2021-2027 European Regional Development Fund allocated €350 million³⁵ budget for Ireland to transition to a greener, low-carbon region, focusing on key areas of smart economics, social inclusion and integrated development of urban, rural and coastal communities.

Through collaborations with cross border and regional development actors, including Local Councils, the North West Energy Agency, SEUPB and Western Development Commission (WDC), Inishowen SEC can play a key strategic role in the development of community engagement models that support green, just and energy transition.

INTERREG Programme

The INTERREG Programme engages public institutions, private sector actors and non-profit organisations from 29 EU countries. Interregional cooperation is budgeted at €379 million with 90% earmarked for interregional cooperation projects among different EU territories. INTERREG provides an opportunity for Donegal based organisations to tap into the European Ecosystem and align with key objectives³⁶ and themes of the 2021-27 programme, including local economic regeneration through cultural inclusion, sustainable tourism community-led local development. Collaborating with national agencies including Failte Ireland and Tourism Ireland on INTERREG programmes can provide an opportunity for Inishowen SEC to support the goals of *enriching communities through sustainably growing and spreading the benefits of tourism across the peninsula*³⁷, as defined in the Inishowen Peninsula Destination & Experience Development Plan.



Figure.17: Interreg Map

³⁵ [Bodies responsible for ERDF in Ireland](#)

³⁶ Interreg Europe 2021 – 2027 | [Cooperation Programme Document](#), Sept 2021

³⁷ Failte Ireland | [Inishowen Peninsula Destination and Experience Development Plan](#)

Horizon Europe

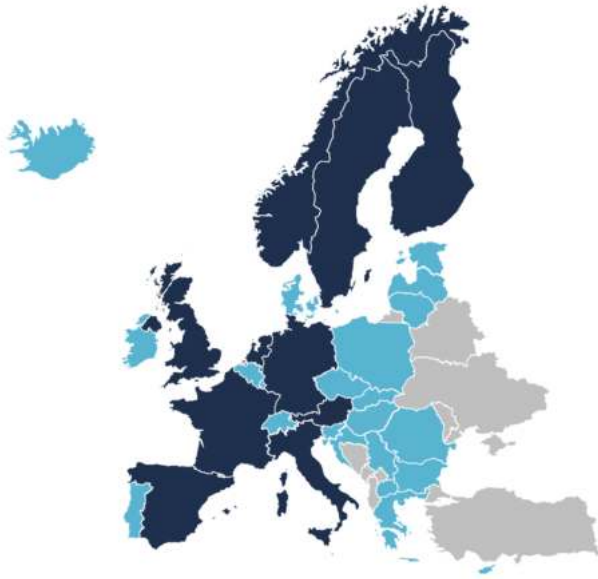


Figure.18: Horizon Europe Map

Horizon Europe is the EU's key funding programme for research and innovation, driving the EU towards a just, green and digital transition. The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. It supports the creation and better diffusion of knowledge and technologies, with a strong history of funding energy community projects and novel solutions for socio-economic transformation.

Supporting green transition to a low carbon economy, through circular community models and cross sectoral collaborations is central to Horizon Cluster 5: Climate, Energy and Mobility³⁸. This stream provides an immense opportunity for the Inishowen SEC to champion best practices across the region by developing capacity in Horizon funding acquisition, facilitated by bid training, peer development and inclusive multi-stakeholder engagement.

National Funding Streams

Inishowen has a range of national enterprise funding streams available to tap in to as schemes across the country and public sphere move towards projects, solutions and activities that focus on sustainable development, community cohesion and facilitation of Green and Just Transition. A wide array of energy-transition funding streams are available, aiming to support the development and implementation of projects that promote renewable energy, community cohesion and reduced carbon emissions in line with 2030 targets.

1. [Climate Action Fund](#) - The Climate Action Fund provides financial support to innovative projects that contribute to Ireland's climate goals. Projects can include renewable energy, energy efficiency, and low-carbon transport initiatives. The fund will provide over €500 million up to 2027 across 2 key strands: Building Low Carbon Communities and Climate Education & Capacity Building.
2. [Shared Island Fund](#) - With more than €140 million already allocated to sustainable tourism, Co-Centres for Research and Innovation on Climate and on Food Sustainability, and Electric Vehicle charging infrastructure. The fund will provide an additional €800 million up to 2030.

³⁸ European Commission Horizon Europe | Work Programme 2023-2024 | [8. Climate, Energy & Mobility, Dec 2022](#)

3. [Green Transition Fund](#) - The Green Transition Fund, by Enterprise Ireland, supports companies across the decarbonisation journey including strategic planning, capability building, investment, research and innovation. The fund comprises two streams: The Climate Planning Fund for Business and The Enterprise Emissions Reduction Investment Fund.
4. [Brexit Adjustment Fund](#) - The Brexit Adjustment Reserve (BAR) fund provides financial support to regions and sectors that have been most affected by Brexit. The fund aims to help deal with the adverse economic, social, territorial, and environmental consequences of Brexit. Over €1 billion from the BAR fund has been allocated to Irish organisations, across Fisheries, Aquaculture and Seafood Processors.

Enterprise Funding

The development of this strategic plan was funded through Enterprise Ireland's REISS fund. Further funding from the Local Enterprise Office and Enterprise Ireland may provide an additional stream of funding, and can be accessed directly or through collaboration with commercial partners within the Inishowen peninsula. The availability of sustainability focused grant schemes provides an opportunity for the Inishowen Sustainable Energy Community to drive local, place- based sustainable enterprise activities while strengthening the commercial capacity and competitiveness of companies in the region.

National Tenders

To access the full potential of sustainable enterprise funding, a dedicated Business to Government (B2G) commercialisation strategy will provide Inishowen SEC with a novel and dynamic self-sustaining funding model that enhances the organisation's commercial positioning within the community while proactively engaging and participating in public sector procurement projects. The strategy is underpinned by a comprehensive B2G Training and Capacity Development programme undertaken by Inishowen SEC during Q1 2023. The key to the strategy's success and overall potential to acquire sustainable revenue and funding from national tendering competitions is based on a 3 tiered model in alignment with government policy driving sustainability, social value and innovation within public tendering.

- P2P - Peer to Peer Development, promoting collaborations and consortia development across SME organisations³⁹.
- SRPP - Socially Responsible Public Procurement, promoting inclusion, community and social enterprise into the tendering supply chain⁴⁰.
- GPP - Green Public Procurement, promoting environmental consideration and measured climate action with tendering activities⁴¹.

Private Sector Strategy

Private Sector funding strategy provides an additional layer of sustainable funding to the Inishowen Sustainable Energy Community. Through alignment with new and existing programmes within the SME and Corporate landscape, Inishowen SEC can proactively engage commercial partners to develop a mutually beneficial activities that align with an organisation's requirements to engage in social, environmental and sustainable activities including:

- **CSR - Corporate Social Responsibility**, a well adopted model for companies to consider the social and environmental impacts of their activities, in addition to their financial performance. CSR can encompass a wide range of activities, including ethical business, volunteering programs, environmental sustainability initiatives, and community engagement.
- **ESG - Environmental, Social & Governance** standards designed to ensure that businesses take into account their environmental and social impact, as well as their governance practices, increasingly being used by investors and stakeholders to make decisions about where to invest.
- **CSRD - Corporate Sustainability Reporting Directive** will come into force in 2024 and will require organisations to report on a wide range of sustainability topics, including climate change, biodiversity, human rights, and social issues.

³⁹ OECD Studies on SMEs and Entrepreneurship | [SME and Entrepreneurship Policy in Ireland](#), 2019

⁴⁰ European Commission | [Buying social – a guide to taking account of social considerations in public procurement \(2nd edition\)](#), 2021

⁴¹ [Department of the Environment, Climate and Communication | Green Public Procurement](#)

Funding Scheme	Description
<i>Special EU Programmes Body (PEACE PLUS)</i>	The PEACE PLUS programme has a budget of €1.2 billion and aims to build a more cohesive and peaceful society in Northern Ireland and the border region of Ireland. It will focus on three main themes: reconciliation, cross-border co-operation, and environmental sustainability.
<i>Just Transition Fund (JTF)</i>	The JTF is a new instrument of the Cohesion Policy 2021–2027, as the first pillar of the Just Transition Mechanism in the context of the European Green Deal, which aims to achieve EU climate neutrality by 2050
<i>European Regional Development Fund (ERDF)</i>	The ERDF aims to strengthen economic, social and territorial cohesion in the European Union by correcting imbalances between its regions. In 2021–2027, it will invest in the social and economic development of all EU regions and cities to achieve a smarter, greener, more connected and more social Europe that is closer to its citizens.
<i>INTEREGG</i>	Interreg is one of the EU's key instruments for promoting territorial cohesion and reducing economic and social disparities across regions. It is aimed at strengthening economic, social, and territorial cohesion within the EU by supporting cooperation across borders.
<i>Horizon Europe</i>	Horizon Europe is the EU's key funding programme for research and innovation. The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. It supports the creation and better diffusion of excellent knowledge and technologies, with a strong history of funding energy community projects.
<i>LIFE Clean Energy Transition</i>	The LIFE Clean Energy Transition sub programme aims to facilitate the transition towards an energy efficient, renewable energy based and resilient economy by funding coordination and support actions across Europe. One of the 18 funding topics of LIFE for 2022 is supporting energy communities and engaging citizens in the energy transition.
<i>Recovery and Resilience Facility (RRF)</i>	RRF aims to mitigate the economic and social impact of the COVID-19 pandemic and make European economies and societies more sustainable, more resilient and better prepared for the challenges and opportunities of the green and digital transitions. It allows the European Commission to raise funds to help Member States implement reforms and investments in line with the EU's priorities and that address country specific challenges.
<i>European Agricultural Fund for Rural</i>	EAFRD finances the EU's contribution to rural development programmes (RDPs) from the CAP. RDPs consist of measures and projects that contribute towards improving the competitiveness of agriculture, encouraging sustainable management of natural resources and climate action, and

**Development
(EAFRD)**

achieving a balanced territorial development of rural economies and communities.

Bid Management Strategy

In Q1 2023, Bid Management and Strategy training was delivered to the Inishowen leadership team, which was supplemented by a detailed training pack outlining the required steps and processes for successful bid management within the context of Public Sector Funding Acquisition, Tenders and Grants. It provided an overview of the bid management process, including pre-bid planning, bid submission and evaluation, post-bid analysis and follow-up, as well as tools and resources that can be used to facilitate the process. Additionally, best practices for bid management and potential benefits of the process were provided.

The Bid Management documentation and training provides further guidance on how Inishowen SEC can utilise a collaborative, peer to peer strategy for proactively engaging with existing commercial and community players in the public sector space. By identifying active players in the Irish and European green transition landscape, Inishowen can develop scalable collaborations, consortia opportunities and strategic partnerships with awardees of tenders and funding, further developing their commercial potential, impact and business model viability.

GROWTH ENABLERS

Among the numerous examples of successful energy transition projects, the New Clean Energy Communities (NEWCOMERS) research programme has analysed and assessed the most robust, innovative and commercially feasible models across the European Union.

The results of the NEWCOMERS commercial analysis identifies a hybrid structure that combines the active participation and democratic decision-making of community energy models with the best practices of self-sustained, revenue-generating business models.

By integrating diverse market actors with varying skill sets and knowledge capabilities, and supporting stakeholder cohesion through technological enablement, energy communities can develop value centric business models that serve the specific place-based scenarios and requirements of their communities, further contributing to their commercial viability and potential.



Figure.19: Newcomers Business Model⁴²

To achieve a balanced, democratic governing business model that has the financial and resource viability to self-sustain, 3 distinct characteristics were noted as critical components in the business model design:

1. Alliances to increase operational options: The ability to form alliances in order to increase the resource availability, specialisms, activities and commercial possibilities. With a particular focus on activation of established (licensed) energy suppliers and non-local actors.
2. New technologies: Ranging from analogue devices to simple digital communication to more sophisticated tools adopting machine learning and automation. Technological adoption from energy communities strengthens organisational capacity and reduces the demand on individual personnel to resource projects.
3. Diverse Value: Providing socio-economic value beyond typical energy supply to the community. Diversifying value for local communities, beneficiaries and society as a whole through proactive progression towards regional objectives and sustainable development goals.

⁴² The [NEWCOMERS](#) (New clean energy communities in a changing European energy system)

Business Design

The below section details the actions to effectively implement the appropriate business model:

Task	Description	Preferred Outcome
Community Wide Resource Analysis	Mapping of available community resources within designated stakeholder group types to understand the wider availability of resources, skill sets, knowledge bases, facilities and technologies.	Definition of actor-technology relationships and resource flows to establish a baseline dataset for peer led business modelling.
Social-Business Model Canvas	Designing a 'social business model canvas' to capture the various business components whilst capturing key consideration of the social metrics and value potential.	Design of socio-sustainable business model, with capture of key components for viable business operations.
Actor Gap Analysis and Assessment	Identifying enablers and barriers through an assessment of actors' capacity, motivations and challenges.	Extract insights regarding potential structure and roles of the business model.
Smart Specialisation Audit	Completion of a Smart Audit of community energy resources and technologies in line with the National Smart Specialisation Strategy for Innovation 2022-2027.	Establishing a national benchmark for place-based assets and resources capabilities.
Stakeholder Interaction Analysis	Alignment with multi-stakeholder governance models to examine the relationships between different actor groupings and constellations.	Identification of champions across distinct domains of the enterprise ecosystem.
Cluster Modelling	Designing a networked model to synergise available actors, resources and technologies in line with European Cluster Excellence and Cluster Policy to strengthen collaboration between regional ecosystems.	Establish a robust network approach of cross sectorial partners in advance of European Funding engagement and acquisition.
Resource and Role Allocation	Assigning specific roles and responsibilities to identified resources who are responsible for maintaining the polycentric governance and operational model, specific to individual capabilities and expertise.	Creation of a decentralised clustered operational team in a lean and resource effective environment.
Community Engagement and Active Participation	Continued engagement with community partners to contribute to an ever evolving strategic direction and business organism within a shifting landscape.	Maintaining co creative sustainable energy system transition through inclusivity and democratisation.

Clustering & Community Engagement

Clustering provides a unique and future focused way to sustainably develop business and grow organically, using an advanced networking approach where community resources are strategically integrated together towards specific objectives. The Cluster Model is designed from a grassroots level, combining different actors and stakeholder types that represent the various voices of the community, expertise, business capabilities and overall placed-based potential.

The [European Cluster Collaboration Platform](#) (ECCP), based on Eurostat and CSO data, provides a visual representation of existing cluster organisations across Ireland with a total of 10 spread across the Southern, Eastern and Midlands regions. Cluster policy in Ireland is a priority within Regional Planning, where the responsibility lies with regional authorities in Ireland to ensure there is consistent drive in policy development at regional level, and that Local Economic and Community Plans (LECPs) and Regional Enterprise Plans (REPs) align to facilitate collaboration, supporting the growth of enterprise ecosystems, driving investment and increasing job creation⁴³

Understanding Inishowen SEC's role in the North West Ecosystem, provides an opportunity to engage with Local Authorities, commercial partners and 3rd level education institutes to strategically progress clustering in the region. Developing cluster capacity across Donegal will strengthen the rationale for deeper investment into the North West region, driving prosperity, empowering the business ecosystem and contributing to sustainable socio-economic growth. Inishowen SEC has the potential to play a key role in planning, coordinating and maintaining the momentum of cluster-focused strategies.

Cluster organisations profiled and active on the ECCP

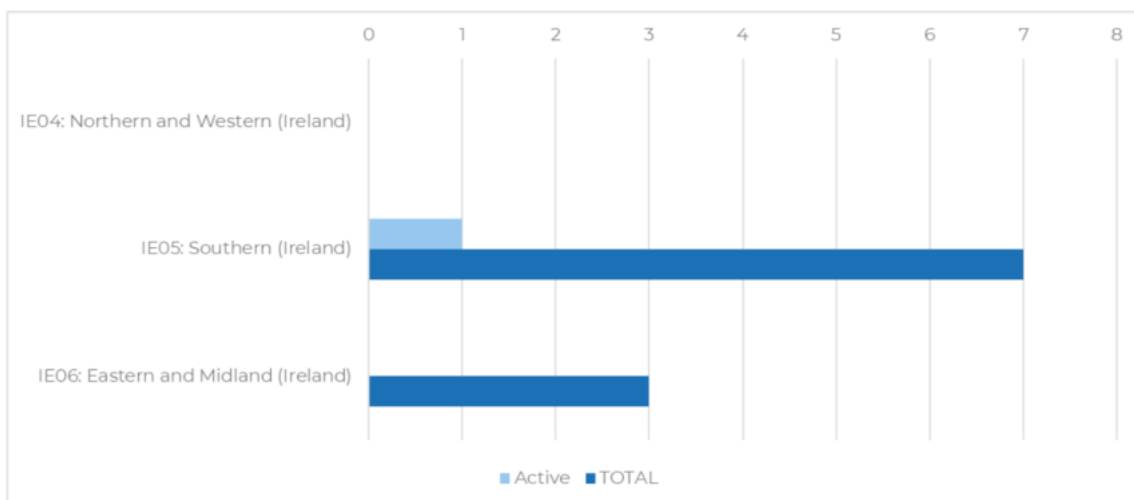


Figure.20: European Cluster Collaboration Platform⁴⁴

Cluster Policy and the activation of cluster organisations across Ireland is still in an early stage of development, with a notable gap in cluster organisations in the North and West regions. Understanding how clustering activities can take shape within the context of energy, green and just transition will provide Inishowen SEC and their partners with a unique method of socio-economic

⁴³ Department of Enterprise, Trade and Employment | [Regional Plans](#)

⁴⁴ [European cluster collaboration platform](#)

regeneration through targeted and coordinated collaborations, placed-based pilot projects and peer to peer development.

The regional ecosystem of the North-West consists of a number of key players who can support the Inishowen clustering initiatives and economic development through a cohesive and coordinated approach. These agencies, including Enterprise Ireland, IDA Ireland, Atlantic Technological University, the Western Development Commission (WDC) and the Local Enterprise Offices, represent a powerhouse of authority in the region and collectively can access and drive significant funding and support pathways for the Inishowen Peninsula, in alignment with specific European frameworks and programmes.

Cluster layering will provide a structured model to facilitate a wider array of stakeholders and actors within the Inishowen Community and cluster ecosystem. Layering will ensure that the overall potential of the peninsula and the capacity of community members is harnessed by commercially focused entities to maximise enterprise development potential. This cross-sectoral approach balances commercial growth with community values, social cohesion, and environmental sustainability.

Higher Level Education provides an additional layer of support for clustering activities, bringing research, development and innovation capabilities to support projects and initiatives. Cross-pollination among community, private sector, and tertiary education fosters sustainable growth by leveraging each sector's strengths. This partnership promotes entrepreneurship, attracts investment, generates jobs, and improves overall community well-being.

Cluster Layers

Community Layer

Community Layer

At the core of the Inishowen Sustainable Energy Cluster, comprising individual community members, active citizens and community organisations maintaining local values and priorities.

Private Sector

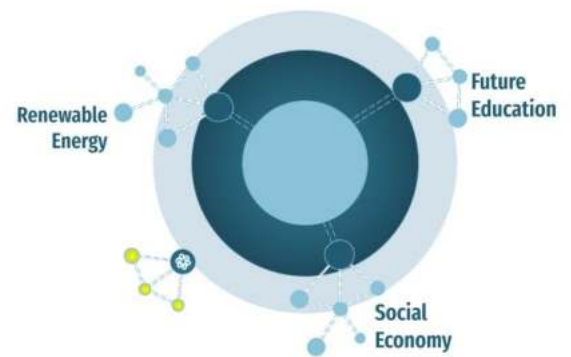
Commercial Layer

Designated commercial partners that contribute to community cohesion and values of the cluster as well as the applicable business growth and commercial opportunities.

Higher Education

Research and Development (R&D) Layer

Supported by Higher Education Partners, where the R&D layer will provide access to academia, research and new technologies to drive innovation, competitiveness and wider funding opportunities.



The *3 Layered Model* is strategically aligned with Horizon Europe funding criteria where clusters must demonstrate an “Inclusive Ecosystem” design bringing industry and academia together, and catalysed by community cohesion. Combined with proactive engagement with local authorities and public sector agencies, this strategy positions the cluster for the *Quadruple Helix Framework* - a best practice standard in European Commission funding programmes

Quadruple Helix Framework

The Quadruple Helix Framework⁴⁵ is an innovation model that emphasises the collaboration and coordination of four key stakeholder types: Government, Industry, Academia, and Civil Society. In the context of Inishowen Sustainable Energy Community, the Quadruple Helix Framework can play a critical role in promoting a just and green transition to a more sustainable and equitable future, where cross sectorial partnerships and collaborations are constructed through a shared vision for the Inishowen Peninsula, Donegal and North West region.

This model has gained traction in European funding acquisition, as it provides a comprehensive approach to addressing complex societal challenges. The Quadruple Helix Framework acknowledges the importance of all four stakeholders working together towards a common goal. Stakeholders from across the public and private sphere collaborate to identify solutions that support sustainable transition, while maintaining an awareness of commercial viability and most importantly, active community engagement and participation.

Government involvement is critical in providing the financial, regulatory and policy supports necessary to drive energy transition practices and projects. The involvement of government agencies in Quad-Helix Cluster Models can further develop Inishowen SEC's capacity at regional level, affecting the communities' capabilities in coordinated lobbying activities, acquiring incentives for renewable energy adoption, engaging with carbon credit and removal schemes and driving overall investment in infrastructure and enterprise capacity into the region.

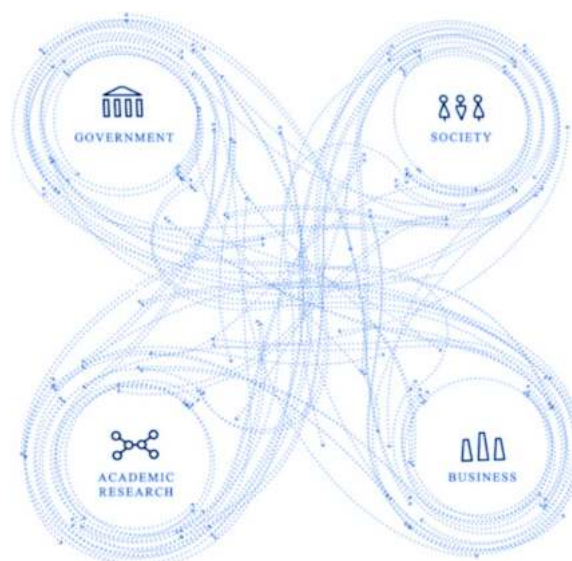


Figure.21: Quadruple Helix Innovation Model

⁴⁵ Roman, M.; Varga, H.; Cvijanovic, V.; Reid, A. Quadruple Helix Models for Sustainable Regional Innovation: Engaging and Facilitating Civil Society Participation. *Economies* **2020**, *8*, 48. <https://doi.org/10.3390/economies8020048>

Cluster Structure Design

Successful cluster design comprises different entities, each playing a designated role and offering a specialised skill set. Specialisation of roles allows for diversification and ensures an inclusive organisational model that enables each individual to play a role in the strategic growth of the cluster and in turn, in their community. Using the three example pillars of cluster activities below, this section details the cluster roles required;

1. **Renewable Energy:** Focused on promoting the development and implementation of sustainable and renewable energy solutions including biogas, solar, wind and retrofitting.
2. **Future Education:** Dedicated to enhancing youth engagement in upskilling, education and future employment pathways.
3. **Social Economy:** Focused on promoting socially responsible and sustainable economic practices that prioritise community, cohesion and environmental wellbeing.

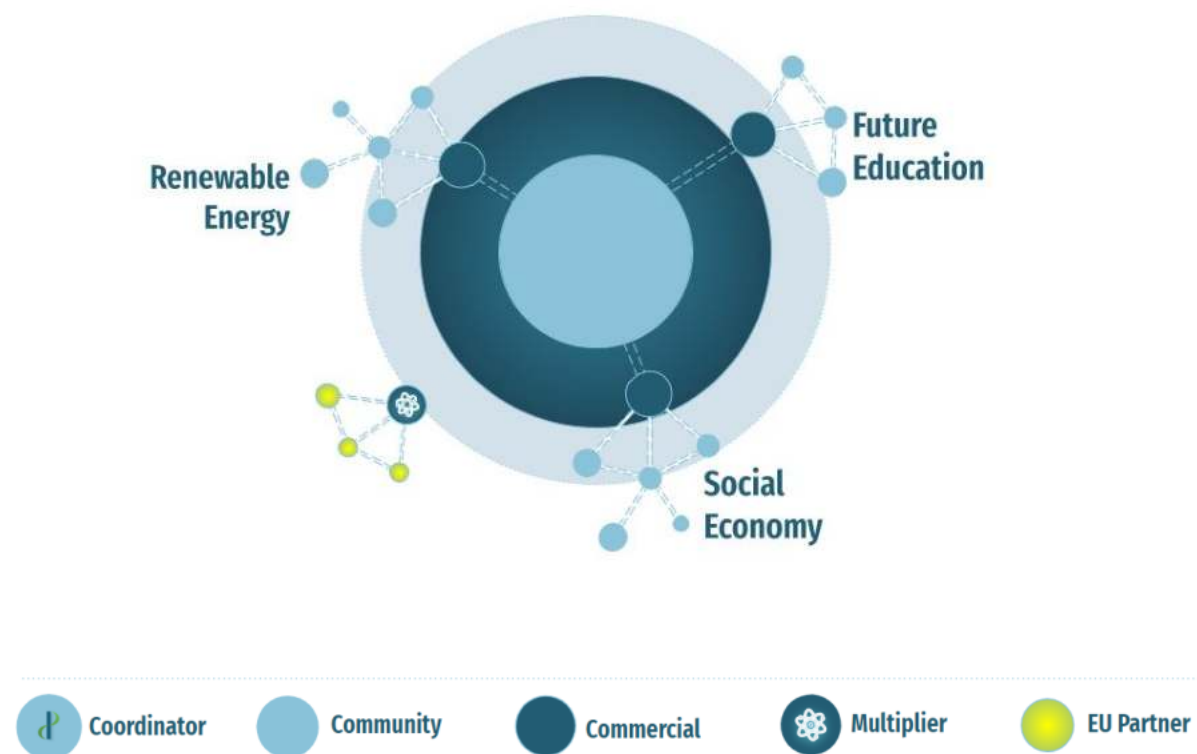


Figure.22: Cluster model structure

Coordinator

A dedicated cluster coordinator is required to establish and manage cluster activities; operations, events, network meetings and identification of funding streams. The Cluster Coordinator's role is to ensure full participation by the cluster members and drive active participation. Coordinators are

responsible for facilitating communication and collaboration among members, fostering a culture of knowledge-sharing and continuous learning, and enabling the cluster to achieve its highest impact.

Community

Community members play a pivotal role in cluster activities, as they represent the voice of the community and provide valuable insights into local perspectives and priorities. Community involvement ensures cluster activities are aligned with the needs of the locality and that the impact and benefits are experienced at grassroots level. Through their active participation and engagement, members can help to shape the direction and vision for the cluster, ensuring that it delivers sustainable socio-economic growth that benefits all stakeholders.

Commercial

Providing the business strategy and commercial engine to the cluster, the Commercial leads are responsible for designing and implementing enterprise strategies to maximise the commercial return of cluster activities and initiatives. Commercial leads play a key role in developing business opportunities which catalyse partnerships with industry, academia, and government agencies. Their expertise in business strategy and commercialisation is essential to the success of the cluster, as they help to translate innovative ideas and technologies into tangible economic benefits for the community.

Multipliers

Multipliers are key partners and subject matter experts within the community, business sphere and public sector landscape that bring a unique skillset to the cluster, driving commercial potential and overall impact through diversification. As influential advocates for the cluster, multipliers leverage their extensive networks and expertise to support cluster activities and initiatives, activating collaborations among members, and support the cluster in areas such as innovation management, lobbying and policy advocacy.

EU Partners

EU Partners play a particularly important role in the regional and cross border operations of cluster activities. With specialist skill sets in sourcing, securing and coordinating EU Funded Programmes, these individuals bring a wealth of knowledge and capability to the cluster, allowing for a sustainable funding acquisition. Diversification allows for a wider reach of developmental potential to be achieved, where Cluster members are supported by a wider array of skill sets and specialisms within thematic areas of focus.

EU Partners can increasingly expand the reach and impact of cluster activities by accessing funding

opportunities led by other EU entities. By utilising the existing platforms, portals and virtual communities, collaborations with EU Partners can be achieved at regional, national and international levels. This cross territory collaboration enables a more diverse and resilient cluster network that taps into the European Innovation Ecosystem.

Intra-EU Cluster Strategy

Intra-EU Cluster Strategy aims to identify peer partners across the European landscape within specific themes and focus areas of energy, just and green transition. The strategy provides a platform for Inishowen SEC to access knowledge, expertise, resources and consortia opportunities that can drive their involvement in EC funded programmes as described in the Funding the Model section.

Through active participation with the European Cluster Collaboration Platform, Inishowen SEC can build a more connected and dynamic ecosystem that expands beyond the geographical limitations of the North West. Developing relationships and targeted collaborations with European organisations can drive inward investment to the North West region while maintaining a low resources model for funding acquisition. This commercialisation model has been a cornerstone of the Bid Management and Strategy training delivered to the Inishowen leadership in Q1 2023. The strategy aims to enhance the competitiveness and commercial sustainability of Inishowen SEC, their community partners and businesses, and promote economic growth and job creation across the region.

SEC Focused Cluster Strategy

On a local level, the Inishowen SEC can utilise cluster strategy within the existing Sustainable Energy Community Network to drive collective action across the North West and throughout the island of Ireland.

Potential channels for collaboration within the SEC network can include:

- North West Energy Agency (NWEA), as a high profile actor in the region driving the clean energy transition.
- Donegal based SECs, engaging the 28 local energy communities to collaborate on local priorities and development.
- Border County SECs, collaborating with the 57 energy communities across the 6 border counties for cross-border specific programmes.
- Midland SECs, connecting with over 125 groups across the midlands region for Just Transition Funding collaborations.
- Leading SECs, identifying key SECs across the country who are leading by example, strengthening inter-group collaborations and driving energy policy and potential at a national level.

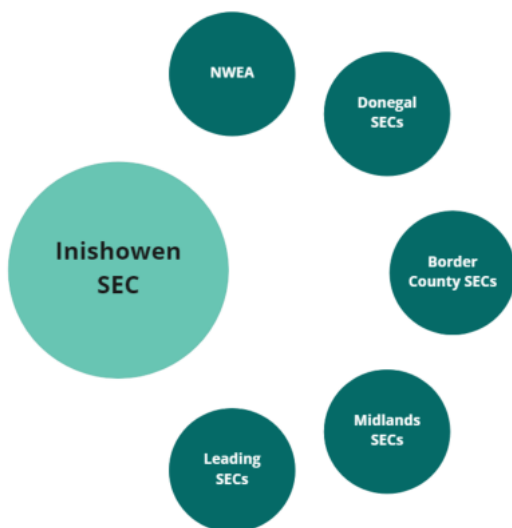


Figure.23: SEC network map

Action Items Business Cluster Setup

Task	Description	Preferred Outcome
Community Wide Resource Analysis	Mapping of available community resources within designated stakeholder group types to understand the wider availability of resources, skill sets, knowledge bases, facilities and technologies.	Definition of actor-technology relationships and resource flows to establish a baseline dataset for peer led business modelling.
Social-Business Model Canvas	Designing a 'social business model canvas' to capture the various business components whilst capturing key consideration of the social metrics and value potential.	Design of socio-sustainable business model, with capture of key components for viable business operations.
Actor Gap Analysis and Assessment	Identifying enablers and barriers through an assessment of actors' capacity, motivations and challenges.	Extract insights regarding potential structure and roles of the business model.
Smart Specialisation Audit	Completion of a Smart Audit of community energy resources and technologies in line with the National Smart Specialisation Strategy for Innovation 2022-2027.	Establishing a national benchmark for place-based assets and resources capabilities.
Stakeholder Interaction Analysis	Analysis of potential governance and decision making models to examine the relationships between different actor groupings and constellations.	Identification of champions across distinct domains of the enterprise ecosystem.
Cluster Modelling	Designing a networked model to synergise available actors, resources and technologies in line with European Cluster Excellence and Cluster Policy to strengthen collaboration between regional ecosystems.	Establish a robust network approach of cross sectorial partners in advance of European Funding engagement and acquisition.
Resource and Role Allocation	Assigning specific roles and responsibilities to identified resources who are responsible for maintaining the polycentric governance and operational model, specific to individual capabilities and expertise.	Creation of a decentralised clustered operational team in a lean and resource effective environment.

Training & Upskilling

It is acknowledged that this plan contains a number of new concepts and ideas which have crystallised through engagement with the Inishowen SEC and the wider community in Inishowen. Central to the successful implementation of the plan and the growth of various aspects of the network is a strategy for training and upskilling.

This section of the document details guidance on training modules that can be undertaken by the SEC in partnership with educational institutions in the region to begin the process of building capacity and ensuring that the necessary skills and knowledge exists to support new projects and opportunities. Training and upskilling can also support behavioural change in the region in a number of ways including:

- **Raising awareness:** Training programs can help people understand the causes and consequences of climate change, the urgency of action, and the potential benefits of adopting sustainable practices.
- **Building skills and knowledge:** Upskilling can equip community members with the necessary skills and knowledge to implement climate-friendly practices and technologies in their daily lives.
- **Empowering local action:** By providing communities with the tools and resources to take action, training and upskilling can help people feel more confident and capable of making a difference at the local level.
- **Fostering social cohesion:** Training programs that bring together diverse stakeholders can promote collaboration, networking, and the sharing of knowledge and resources.
- **Encouraging innovation and entrepreneurship:** Upskilling can help community members identify new opportunities for sustainable development, such as creating green jobs or launching climate-resilient businesses.
- **Creating local role models:** As community members become more knowledgeable and skilled in addressing climate change, they can serve as role models and inspire others to follow in their footsteps.
- **Advocacy and policy engagement:** Training and upskilling can enable community members to effectively engage with policymakers and advocate for climate-friendly policies and regulations.

By combining awareness-raising, skill development, empowerment, and social cohesion, training and upskilling initiatives can foster a culture of climate action within local communities and help drive the transition to a more sustainable future. The tables below detail recommended modules to support these efforts with workshop sessions typically taking place across a number of days but schedules can be adapted to suit participants with the option to also deliver these online across a number of weeks:

1. The Social and Solidarity Economy (SSE) and a Just Transition
2. Participatory Design for Sustainability
3. Multi-Stakeholder Cooperative Governance Using Sociocracy
4. Socio-technical Systems and Change Management Strategies
5. Leveraging Emerging Technologies for Community-led Climate Action and Entrepreneurship
6. Climate Leadership for Community Role Models

The Social and Solidarity Economy (SSE) and a Just Transition

Overview

The social and solidarity economy (SSE) is an alternative economic approach that prioritises social and environmental objectives over profit maximisation. It is characterised by collective action, democratic decision-making processes, and the pursuit of social, economic, and environmental justice.

Objective

To educate participants on the social and solidarity economy (SSE) and its relevance to sustainable energy communities, while empowering them to integrate SSE principles into their projects and practices for fostering a just transition towards a sustainable, equitable, and inclusive energy future.

Core Topics

- History, principles and values of the SSE.
- Key principles and goals of a just transition
- Key actors, stakeholders and case studies.
- Capacity building, skills development and social inclusion
 - Retraining and skill development for workers transitioning from fossil fuel industries
 - Ensuring fair labour practices, worker's rights and gender equality.
 - Addressing energy poverty and ensuring affordable access to clean energy for all.
- Environmental justice and community resilience
 - Assessing and mitigating the potential negative impacts of renewable energy projects on local communities and ecosystems.
 - Strengthening community resilience to climate change and other environmental challenges.
 - Promoting community-based and locally-led solutions to address environmental justice issues.
 - Engaging marginalised and vulnerable populations in decision-making processes.
- Identifying opportunities and cross-sector partnerships
 - Collaborating with labour unions, environmental organisations, and social justice advocates.
 - Engaging with policymakers and regulators to create enabling environments for a just transition in the SSE.
 - Relationship between SSE and the United Nations Sustainable Development Goals (SDGs).

Participants

Training can be adapted to suit various different levels of skills and experience but it would be most suited to community leaders and activists, members of cooperatives and social enterprises, policy makers, NGOs and non-profit organisations in the region.

Participatory Design for Sustainability

Overview

Participatory design is a process where people who will be affected by a project or decision, such as community members, are actively involved in designing and planning it. This approach ensures that everyone's needs, ideas, and perspectives are considered, leading to solutions that are more relevant, effective, and sustainable.

Objective

The primary objective of this training program is to equip participants with the skills, tools, and knowledge necessary to effectively engage and involve communities in the design and implementation of sustainable solutions, using participatory design principles and practices.

Core Topics

- Introduction to Participatory Design for Sustainability:
 - The importance of community engagement and inclusivity in sustainable development
 - The role of participatory design in fostering community ownership and commitment
- Identifying and Engaging Stakeholders:
 - Mapping and analysing key stakeholders in the design process
 - Building relationships and trust with diverse community members
- Facilitating Participatory Design Processes:
 - Techniques and tools for facilitating inclusive design workshops and meetings
 - Managing group dynamics and ensuring constructive dialogue
- Co-creation and Collaboration:
 - Encouraging creative problem-solving and idea generation
 - Integrating diverse perspectives, needs, and priorities in the design process
- Integrating Local Knowledge and Context:
 - Recognizing and valuing local knowledge, skills, and resources
 - Adapting design processes and solutions to local context and culture
 - Ensuring that sustainable solutions are locally relevant and appropriate

Participants

This training is for individuals and professionals who are involved in designing, planning, and implementing sustainability projects or initiatives and want to engage communities in the process. This may include community organisers, environmental activists, sustainability consultants, local government officials, or members of community-based organisations.

Multi-Stakeholder Cooperative Governance Using Sociocracy

Overview

Sociocracy is a collaborative and democratic decision-making method that aims to promote equality, transparency, and efficiency in organisations. It is based on the principles of consent decision-making, where decisions are made when there are no significant objections from group members. Sociocracy uses a system of interconnected circles or teams, where each circle has specific roles and responsibilities. This approach encourages active participation, open communication, and continuous feedback, helping organisations make more inclusive and effective decisions.

Objective

This training program is designed to provide participants with the knowledge and skills necessary to establish and implement effective multi-stakeholder cooperative governance using sociocracy as the decision-making protocol. The training will focus on the principles and practices of sociocracy, consensus-building, and collaborative governance in the context of multi-stakeholder cooperatives.

Core Topics

- Overview of multi-stakeholder cooperatives: definition, benefits, and challenges.
- Introduction to sociocracy: history, principles, and key concepts.
- Comparison of sociocracy with other decision-making protocols.
- Core elements of sociocracy: circles, roles, and double-linked hierarchy.
- Case studies: Successful examples of multi-stakeholder cooperatives using sociocracy.
- The consent decision-making process: principles, steps, and best practices.
- Dynamic governance and feedback loops: continuous improvement and adaptation.
- Conflict resolution and handling objections in a sociocratic environment.
- Effective communication and active listening skills for collaborative governance.
- Building trust and fostering a culture of transparency and openness.
- Strategies for engaging diverse stakeholders and promoting inclusivity.
- Monitoring, evaluation, and continuous improvement of the governance process.
- Developing an action plan for implementing sociocracy in participants' cooperatives.

Participants

This training is best suited for members and managers of multi-stakeholder cooperatives, social enterprises, non-profit organisations, and other groups interested in implementing democratic and inclusive decision-making processes through sociocracy.

Socio-technical Systems and Change Management Strategies

Overview

A socio-technical system is a system that combines both social and technical aspects. It is made up of people, organisations, and technology interacting together to achieve a particular purpose or goal such as the Inishowen SEC. In such a system, social factors like communication, decision-making, and human behaviour work hand-in-hand with technical components like machines, infrastructure, and tools. By considering both the social and technical dimensions, socio-technical systems help us better understand how these elements influence one another and the overall system performance.

Objective

The objective of this training is to empower participants to design, implement, and evaluate effective strategies for transformational change in their organisations and the broader socio-technical systems they operate within, contributing to a more sustainable and resilient future.

Core Topics

- Introduction to transformational change and its relevance to organisations and socio-technical systems.
- Change management and transition studies: similarities, differences, and interconnections.
- Phases of change: initiation, planning, implementation, and stabilisation.
- Barriers and drivers of change: identifying and addressing key factors that influence transformational change processes.
- Case studies: understanding transformational change in organisations and socio-technical systems through an investigation of the energy sector in Ireland.
- Systems perspective: understanding complex interactions in organisations and socio-technical systems.
- Integrating sustainability and environmental considerations into change strategies.
- Learning and adaptation: monitoring progress, evaluating outcomes, and adjusting strategies.
- Resource management and capacity building for change initiatives.
- Navigating resistance and conflict during transformational change processes.

Participants

Training can be adapted to suit various different levels of skills and experience but it would be most suited to mid-level to senior professionals, sustainability and environmental practitioners, and policy-makers working in the region that are interested in organisational change and socio-technical systems.

Leveraging Emerging Technologies for Community-led Climate Action and Entrepreneurship

Overview

Remote working and cloud-based technologies have significantly levelled the playing field for rural communities when it comes to working on technology products related to climate action. By leveraging new technologies, businesses, governments, and communities can work together to create more sustainable, circular economies that foster entrepreneurship, drive innovation and stimulate local economies.

Objective

To equip participants with the knowledge and skills to identify, adopt, and promote emerging technologies that can drive climate action, encourage entrepreneurship, and foster innovation in their communities, while adhering to the principles of open-source, just transition, and the social and solidarity economy.

Core Topics

- Overview of emerging technologies for community climate action.
- Open-source technologies to support a just transition and the social and solidarity economy
 - **Modern Method of Construction (MMC)** for community-led housing. Case studies benefits, and challenges.
 - **Property technology, PropTech**, for efficient, cost-effective, and scalable retrofitting projects.
 - **No-code platforms:** democratising technology development for community-led solutions
 - **Civic tech**, technology that empowers citizens and communities to engage in civic processes, decision-making, asset mapping and citizen science projects.
 - Technologies to support the **circular economy** by optimising resources, minimising waste, and extending the life of products and materials.
- Strategies for encouraging entrepreneurship and innovation in communities.
- Building partnerships and collaboration between technology businesses, community organisations, and other stakeholders to identify opportunities for new technology development.
- Funding and support for community-based technology projects and businesses
- Measuring impact and ensuring long-term sustainability of technology initiatives

Participants

This program is best suited for community leaders, activists, professionals from diverse sectors, policymakers, and researchers who are interested in leveraging emerging technologies to drive climate action, entrepreneurship, and innovation in their communities.

Climate Leadership for Community Role Models

Overview

Effective climate leadership provides a clear vision and direction for sustainable development and climate action. These leaders foster collaboration and partnerships across different sectors, disciplines, and stakeholders. They aim to empower and engage individuals and communities by inspiring them to take action on climate-related issues.

Objective

It was noted in the community engagement that there currently is a lack of role models in the Inishowen region due to a number of factors. The primary objective of this training program is to equip community role models with the knowledge, skills, and tools to become effective climate leaders, capable of promoting climate action and sustainability within their communities by leveraging alternative leadership styles and approaches.

Core Topics

- Introduction to Climate Leadership:
 - The importance of climate leadership in driving community-based climate action
 - Key qualities and characteristics of effective climate leaders
- Alternative Leadership Styles and Approaches:
 - Overview of various leadership styles (e.g., transformational, servant, adaptive, collaborative)
 - Assessing personal leadership styles and identifying areas for growth
- Inspiring and Engaging Others in Climate Action:
 - Communicating the urgency and importance of climate action
 - Empowering individuals and groups to take ownership of climate-related initiatives
- Fostering Collaboration and Partnerships:
 - Identifying and connecting with key stakeholders in climate action (e.g., local government, businesses, NGOs)
 - Building and maintaining effective partnerships for climate action
- Cultivating Resilience and Adaptability:
 - Promoting a culture of learning, innovation, and continuous improvement in climate action
 - Adapting to changing circumstances and emerging climate challenges

Participants

This training program is aimed at community champions who are passionate about climate action and sustainability. These individuals may include local leaders, activists, educators, entrepreneurs, or members of community organisations who are committed to driving positive change within their communities.

CONCLUSION

Conclusion

Established in 2019 through the combined efforts of the Inishowen Development Partnership (IDP), the Inishowen Co-Operative Society Limited, Donegal County Council (DCC), and a diverse group of stakeholders, the SEC has come a long way in its attempts to transform the energy landscape in the region. The publication of this strategic plan represents another key milestone for Inishowen SEC on its journey towards energy independence, which will bring many economic, social, and environmental benefits.

The plan, created with the support of Enterprise Ireland's Regional Enterprise Innovation Scoping Scheme 2022 (REISS), demonstrates a robust community-led vision for Inishowen by outlining governance models, training programs, funding pathways, and catalyst projects, all designed to empower local communities and ensure a just transition for the region.

As the SEC moves forward to the next stage, it is essential to remember that the success of this initiative relies on the continued support and active participation of the community. Community members are invited to take part and make this ambitious vision a reality. If you're interested in getting involved or seeking more information, please refer to the details provided below.

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