Hook Peninsula Energy Masterplan

CLIMATE ACTION WEXFORD
OUR COUNTY. OUR OPPORTUNITY. OUR FUTURE

Comhairle Contae Loch Garman
Wexford County Council

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

SOUTH EAST ENERGY AGENCY

TABLE OF CONTENTS

CHAIRPERSON'S ADDRESS

In 2023, the Fethard-On-Sea Sustainable Energy Community (SEC), a voluntary group, was established. The SEC was established with the aim of fostering community engagement and support in steering Fethard-On-Sea towards a low-carbon future. Fethard-On-Sea SEC is affiliated with a larger network of SECs across the twenty-six counties. This network is overseen by the Sustainable Energy Authority of Ireland (SEAI), which extends guidance, mentorship, and facilitates access to grant support.

OUR VISION

To create a vibrant energy-efficient community that is cognisant of the present, and future needs of Fethard-On-Sea while striving to reduce the catchment areas carbon footprint while generating energy savings for all community members. As an initial measure, Fethard-On-Sea SEC has resolved to initiate the development of an energy master plan for Fethard-On-Sea in Co. Wexford.

The master plan:

1. *Assesses the existing energy status within our community to establish a baseline for electrical, thermal, and transportation energy demands.*

2. *Identifies renewable energy sources already present within the community.*

3. *Incorporates a Register of Opportunities, detailing potential projects for enhancing energy efficiency and adopting renewable energy solutions.*

4. *Defines appropriate projects for the initial three-year period and establishes targets for reducing energy consumption based on the baseline data.*

This plan was formulated between April 2023 and May 2024. On behalf of the committee, I express our appreciation to SEAI for their grant support and mentorship provided to the SEC and also Fiona O'Loughlin and Dr Yvonne Byrne for their invaluable advice, support, and mentorship. A special acknowledgment goes to the SEC committee for their dedication over the past year.

We are delighted to present the Energy Master Plan for Fethard-On-Sea to our local residents. While we acknowledge that this plan marks just the initial step on a lengthy journey, we hope it serves as a catalyst to turn our vision into reality.

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Chairperson Fethard-On-Sea SEC

FETHARD-ON-SEA PROFILE

Fethard Community Development Association (FDCA) in Fethard on Sea on the Hook Peninsula in Wexford is a small coastal community group with big energy. Originally formed in 2006, the voluntary group created a 5 Year Plan in 2018 to focus on local needs identified through an extensive community survey.

FCDA, having fostered strong links with Wexford County Council, other community groups, sporting clubs etc, have implemented a number of projects including a social enterprise, solar lit outdoor gym/running track, and the transformation of Fethard Castle and grounds including a walking trail under grant funding from Town & Village Renewal, BIM FLAG, WLD Leader Funding and Heritage grants.

Current projects underway include a Community Garden, restoration of a derelict RIC Barracks into an intergenerational community hub and becoming a Sustainable Energy Community.

The work of FCDA combined with local dynamic community spirit is transforming the area into an inclusive, resilient and progressive place to live and visit.

GLOSSARY OF TERMS

This report has been developed with language which is non-technical so that it can be read by a broad audience in conjunction with infographics and images. Where additional terminology has been required to describe certain elements of the report a glossary of terms has been provided. An additional resource for understanding terminology around energy efficiency is https://climatejargonbuster.ie/Energy Efficiency

Energy Efficiency - It is energy efficient when we use less energy to achieve the same result.

Register of Opportunities (RoO) - The Register of Opportunities is a list of projects or opportunities within your community which if executed will result in energy efficiency and a reduction in energy use and the associated CO_2 output.

Kilowatt hours (kWh) - One kilowatt-hour is equivalent to 1000 watts of energy used for 1 hour. For example, a 100-watt lightbulb switched on for 10 hours uses one kWh of electricity.

Thermal Energy - Defined as energy used to generate heat. This commonly refers to the energy used to heat homes by burning oil, timber peat or using electricity in heat pumps.

Energy Savings - Energy in whatever format it is being consumed usually costs money (€). By reducing the amount of energy consumed you are also reducing the cost associated with providing that energy.

Building Energy Rating (BER) - BER stands for Building Energy Rating. A BER certificate shows you the energy performance of your home. It is a good indicator of how much you will spend on energy (like heat and light) and how much CO_2 you will release to heat your home to a comfortable level.

T**he BER rating goes from A to G**. A-rated homes are the most energy efficient, comfortable and typically have the lowest energy bills. G Rated homes are the least energy efficient and require a lot of energy to heat the home.

Renewable Energy - Renewable energy comes from renewable resources like wind energy, solar energy, or biomass. These resources

can regenerate naturally, and we can use them repeatedly without reducing their supply.

Carbon Dioxide/ CO_2 - Carbon dioxide is a powerful greenhouse gas. It is naturally part of the air we breathe. However, human activities like burning of fossil fuels and deforestation have led to an increase in CO_2 in the air that contributes to climate change.

Carbon Footprint - Carbon footprint measures the carbon emissions linked to a particular activity or product. It includes emissions involved in all stages of making and using a product or carrying out an activity. The lower the carbon footprint the less that a product or activity contributes to climate change.

Renewable Electricity Support Scheme (RESS) - This Government scheme provides financial support to renewable electricity projects in Ireland to help us achieve our renewable electricity goals. It also aims to increase community participation in, and ownership of, renewable electricity projects. It aims to make sure electricity consumers get value for money and to improve security of our electricity supply.

Sustainable Energy Community (SEC) - An SEC is a community in which everyone works together to develop a sustainable energy system. To do so, they aim as far as possible to be energy efficient, to use renewable energy where feasible and to develop decentralised energy supplies.

Units - Throughout this report we present energy use and energy production, in kilowatt or megawatt hours per annum (KWh/yr) and (MWh/yr). These units of measurement are used regardless of the fuel used. As a reference point, a typical house consumes approximately 22MWh per annum. We also present carbon emissions in tonnes or kg of CO_2/annum. Energy costs are presented in euro spent on energy per annum.

Energy Credits - Projects that generate verifiable energy saving credits, can be sold to energy suppliers and obligated parties. The obligated Energy Suppliers then apply the energy savings towards their yearly targets, reducing overall energy consumption and carbon emissions.
For a more detailed explanation please see: https://www.seai.ie/business-and-public-sector/business-grants-andsupports/energy-efficiency-obligation-scheme/

Small Area Plans - Small Areas are areas of population generally comprising between 80 and 120 dwellings created by The National Institute of Regional and Spatial Analysis (NIRSA) on behalf of the Ordnance Survey Ireland (OSI) in consultation with CSO. Small Areas were designed as the lowest level of geography for the compilation of statistics in line with data protection and generally comprise either complete or part of town-lands or neighbourhoods. There is a constraint on Small Areas that they must nest within Electoral Division boundaries.

IRELAND'S CLIMATE ACTION PLAN 2023

The Climate Action Plan 2023 (CAP23) is the second annual update of Ireland's Climate Action Plan 2019. This plan is the first to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021, and following the introduction, in 2022, of economy-wide carbon budgets and sectoral emissions.

The plan implements the carbon budgets and sectoral emissions ceilings and sets out a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050, as committed to in the Programme for Government. Climate Action Plan 2023 sets out how Ireland can accelerate the actions that are required to respond to the climate crisis, putting climate solutions at the centre of Ireland's social and economic development.

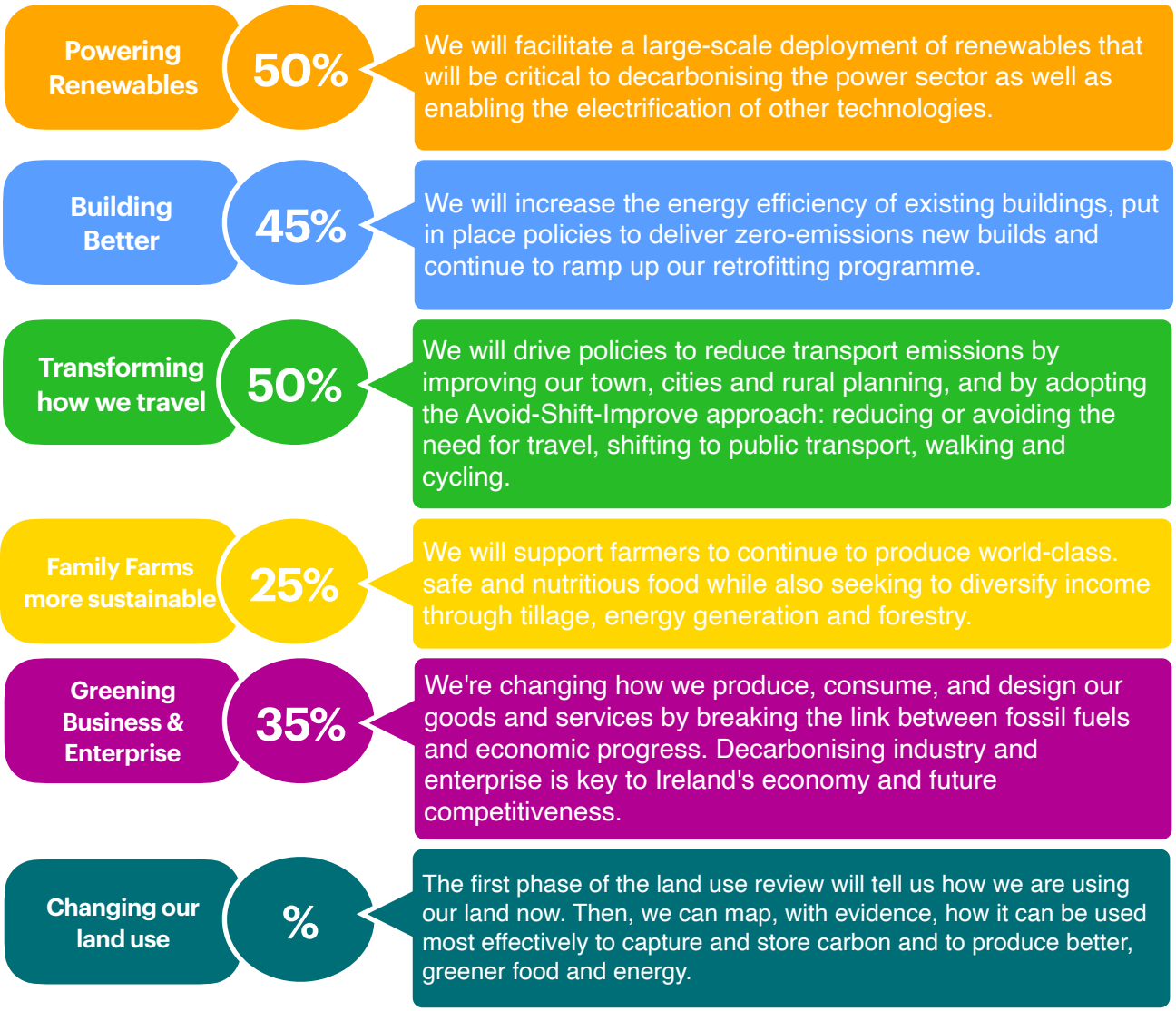


Table 1 – Summary of the sectoral targets in the 2023-2030 Climate Action Plan

ENERGY MASTER PLAN SUMMARY

In support of Fethard-On-Sea SECs objectives, an Energy Master Plan study has been undertaken. This initiative, funded by SEAI, aims to assist in developing and refining short, medium and long-term plans for the SEC.

The primary objective of the Master Plan is to facilitate communities in comprehending their existing energy consumption and carbon footprint, enabling them to establish reduction objectives for the future. The data collected and tools devised for project evaluation will support the SEC in its endeavour to become a leading model in transitioning to a low-carbon community.

The Energy Master Plan is based on a mixture of desktop research utilising publicly available information sets from a range of sources such as CSO (Central Statistics Office), SEAI (Sustainable Energy Authority Ireland), CIBSE (Chartered Institute of Building Services Engineers), Pobal, County Council, etc.

Using a new modelling tool and methodologies developed in 2023 using the latest new CSO 2022 census information and SEAI data streams this report outlines the energy consumption, emissions and energy spend within the community associated with energy.

The EMP begins with a sectoral energy breakdown that will give a broad overview of each sector's (Residential, Commercial, Transport) energy consumption, energy cost and contribution to CO2 emissions in the SEC.

These sections form the basis of the recommendations and options supplied for a transition to renewable energy sources in each of the sectors as well as opportunities for energy reduction and increased efficiency within the Register of Opportunities document.

The EMP identifies the potential for the implementation of sustainable transport models such as electric vehicle (EV) charging infrastructure, alongside renewable energy generation possibilities from many varying sources such as wind, solar etc.

Reviewing the natural resources available to the community, high level analysis is provided on various renewable energy technologies that the community could further pursue. A wide range of natural resources are often within a community's grasp, however the understanding of how to progress from a concept through to reality can be an enormous barrier.

This Energy Master Plan (EMP) outlines the steps necessary for the SEC to assess the potential of these resources and identifies the pathway for renewable projects to evolve from concept to community-owned systems.

The EMP culminates with an Action Plan and Register of Opportunities segment, serving as a benchmarking tool for the community's pursuit of enhanced energy efficiency and carbon footprint reduction throughout the coming decade.

The advantage of the EMP lies in its function as a roadmap for the SEC's journey toward

sustainable energy and as a means to support applications for capital grants aimed at improving existing residential and commercial building infrastructure.

Moreover, the EMP can serve as a tool to heighten awareness about energy efficiency. This process begins with the distribution of an interactive community survey, followed by consultations with the SEC committee, energy audits of commercial buildings, and culminates with the release of the report.

This report includes recommendations, demonstrating examples of what the community can do to change behaviour and increase the understanding of climate action and how those involved can contribute toward this shared objective of reducing their impact on the environment.

The EMP covers 9 Small Area Plans[1] which are defined by the Central Statistics Office (CSO) and are shown below in Figure 1.

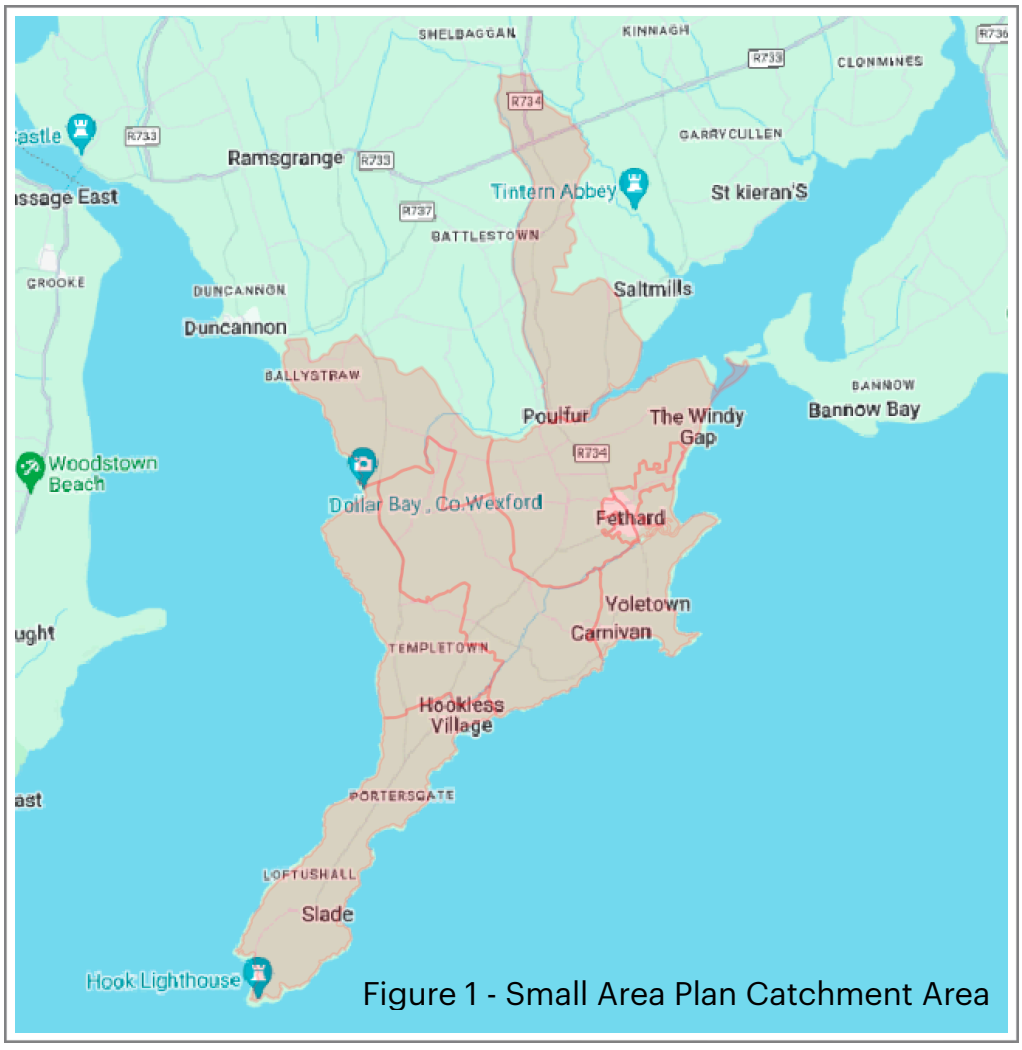


Figure 1 - Small Area Plan Catchment Area

[1] **Small Area Plans** - Small Areas are areas of population generally comprising between 80 and 120 dwellings created by The National Institute of Regional and Spatial Analysis (NIRSA) on behalf of the Ordnance Survey Ireland (OSI) in consultation with CSO. Small Areas were designed as the lowest level of geography for the compilation of statistics in line with data protection and generally comprise either complete or part of town-lands or neighbourhoods. There is a constraint on Small Areas that they must nest within Electoral Division boundaries.

EXECUTIVE SUMMARY

The table below provides an overview of the energy consumption, emissions and associated costs of energy consumption within the catchment area of Fethard-On-Sea SEC.

	Electricity	Fossil Fuels	Transport	Total
Energy MWh	5,968	9,664	7,570	23,202
CO2 Emissions tCO2	1,891	2,596	1,916	6,402
Total Energy Cost	€858,827	€1,831,630	€1,433,555	€4,124,012

Table 2 – SEC Total Energy, CO_2 and Cost Analysis

The information detailed above is based on the latest data from the Central Statistics Office 2022 Census of Ireland (CSO 2022) in conjunction with the emissions and energy cost data provided by the Sustainable Energy Authority of Ireland (SEAI). The information provided above is specific to the catchment area of the Sustainable Energy Community (SEC).

The Energy Master Plan breaks down the energy consumption and fuel mix within the community's catchment area into 3 key sectors consisting of:

1) Residential (*645 Residential Units*)
2) Non-Residential (Commercial /Public Sector Building stock)
3) Transport.

The individual sectoral baseline energy usage which will be discussed in detail later in the report is summarised in Table 3 and provides an overview of the energy balance for the community.

SEC Primary Energy Baseline (kWh)				
Sector	Electricity	Fossil Fuel	Renewable	Total (MW)
Residential	5,475,232	8,705,895	305,470	14,487
Non-residential	492,555	957,950		1,451
Transport	84,497	7,485,546	562,962	8,133
Total Energy	6,052,284	17,149,391	868431.887	24,070

Table 3: Sectoral energy consumption

Based on the information detailed above the energy consumption within the catchment area, 60% of the energy demand relates to the residential sector, 6% in the non-residential sector, and approximately 34% in the transport sector.

RESIDENTIAL SECTOR

In 2022 the Residential Sector in Ireland was responsible for 10% of Ireland's Green House Gas emissions[2]. This is a decrease of 12.7% on the 2021 figures, which is a substantial reduction in emissions driven by high fuel costs, regulation and a milder winter.

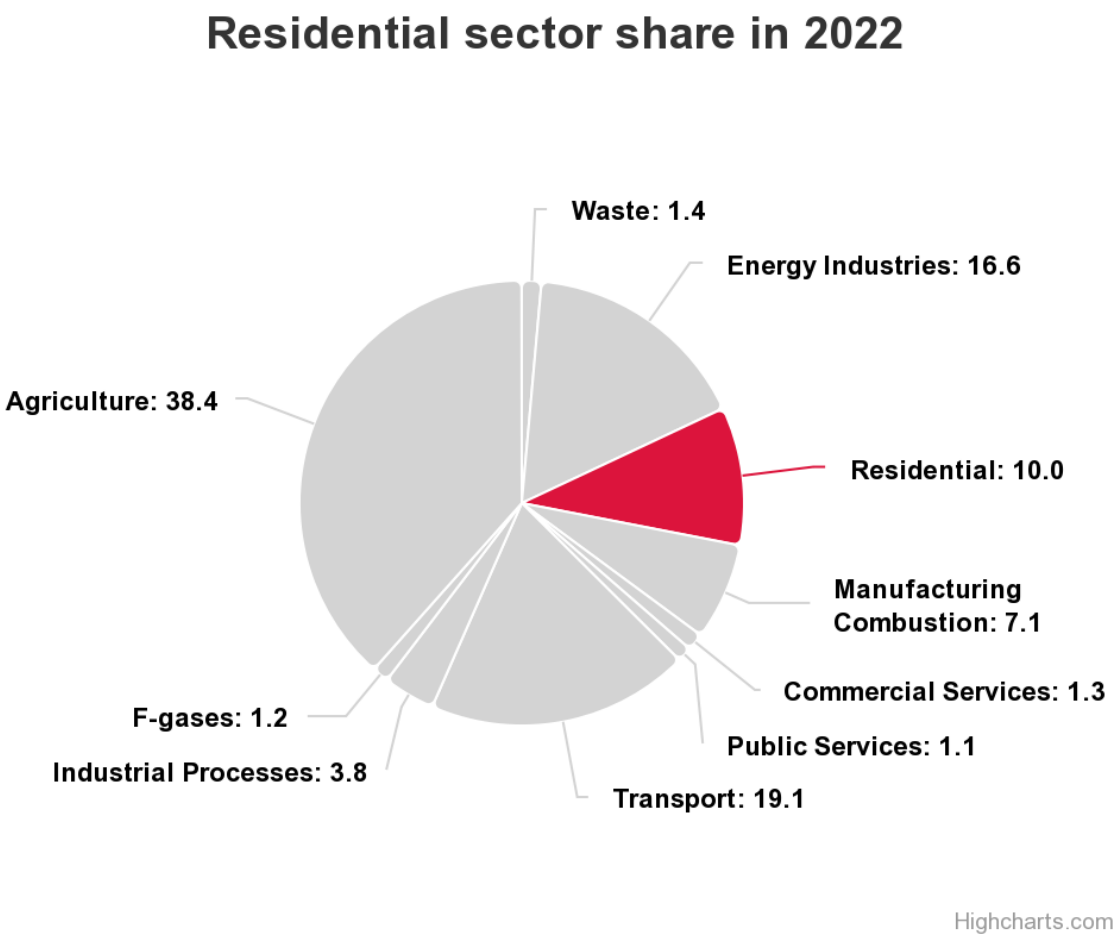


Figure 2 Residential Sector

Within the different fuels used in household space and water heating, decreases were seen in coal, peat, kerosene and natural gas by 33.1%, 12.7%, 16.5% and 9.3% respectively in 2022.

The governments target of a 40% reduction in emissions from residential buildings by 2030 will be driven by the upgrading of insulation levels within the existing housing stock, therefor reducing the level of energy required to heat the homes and leading to a reduction in the emissions associated with the residential sector. In conjunction with the reduction of the level of heating required due to insulation upgrades, the transition away from fossil fuel heating sources to heat pumps will also reduce the emission levels associated with the

[2] https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/residential/

residential sector. The Irish government has set an ambitious target of 'retrofitting'[3] 500,000 homes to a B2 Building Energy Rating (BER) by 2030.

An analysis of the residential building stock within the catchment area of Fethard-On-Sea SEC has been carried out based upon housing age, occupancy, ownership status and primary heating sources within the buildings. The type of fuel used to heat a house can have a significant effect on the carbon footprint of the building.

Fuel	gCO2/kWh
Coal	340.6
Natural Gas	184.6
LPG	229.3
Kerosene	257.0

Table 4: Emission Factors for Fuels[4]

METHOD

An analysis of the residential housing stock within the catchment area of Fethard-On-Sea has been carried out based on the Central Statistics Office (CSO) census data 2022 and Building Energy Rating Data provided by SEAI.

The residential analysis is based on the the baseline year of 2022. Primary residential heating is based upon the national averages and heating types identified with the CSO data for the catchment area. Fuel pricing and emission factors are based on the most up to date figures provided by SEAI at the time of writing of this report.

[3] Improvement of the buildings overall energy efficiency through the installation of insulation and efficient heating systems.

[4] https://www.seai.ie/data-and-insights/seai-statistics/conversion-factors/

RESULTS AND ANALYSIS

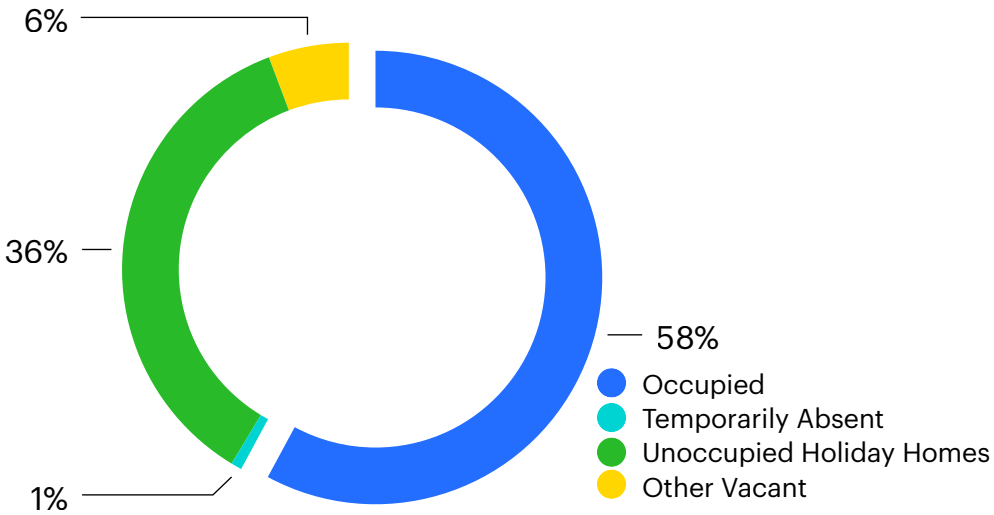
HOME OCCUPANCY/USE

Within Fethard-On-Sea, due to it beautiful scenic coastal landscape and abundant beaches, there is a significant percentage of the building stock which is classified as unoccupied holiday homes for the purpose of this energy master plan. 36% of the residential buildings which are occupied at a significantly reduced level are within the catchment area. There buildings which may also be rented privately on a short-term basis are not included in the base line figures for the residential sector due to the seasonal nature of the tourism season in Fethard-On-Sea in comparison to other locations with a high short-term let market such as Carrick-on-Shannon or Westport.

			State	
Occupancy status on Census night	No. of homes	% of homes	No. of homes	% of homes
Occupied	676	57.9%	1,846,938	87.4%
Temporarily absent	9	0.8%	34,794	1.6%
Unoccupied holiday homes	416	35.6%	66,956	3.2%
Other vacant	67	5.7%	163,433	7.7%
Total	1,168	100%	2,112,121	100%

Table 5 Building Occupancy Analysis.

Figure 3 - Housing Occupancy



HOME OWNERSHIP MODELS

Within the catchment area of Fethard-On-Sea SEC there are approximately 645 residential units in full time occupation, of which 87% are classified as Houses and 13% as Flat/ Apartment. Of these housing units 73% are owner occupied and 27% are rental.

	Fethard-On-Sea SEC		National Averages	
Occupancy type	No. of homes	% of homes	No. of homes	% of homes
Owned with mortgage or loan	141	21.9%	531207	28.9%
Owned outright	333	51.6%	679718	37.0%
Rented from private landlord	56	8.7%	330632	18.0%
Rented from Local Authority	42	6.5%	153192	8.3%
Rented from voluntary/co-operative housing body	1	0.2%	29880	1.6%
Occupied free of rent	34	5.3%	31864	1.7%
Not stated	38	5.9%	80235	4.4%
Total	645	100%	1836728	100%

Table 6 – Percentage occupancy type excluding holiday homes (CSO, 2022)

The number of properties which are owner occupied is 73% and this can imply a greater appetite for home retrofitting as the occupier of the property has the ability to independently make a decision about investment in the property. The 27% of the properties which are within the rental market are more difficult to upgrade as the decision and investment has to be made by the property landlord and not the occupant.

Given that the landlords do not currently benefit directly from the reduction in energy consumption associated with retrofits, additional incentives within the market to encourage landlords to make energy improvements in their properties will be required before major changes occur.

Green mortgages however, are a recent financial innovation in the Irish mortgage market, being established as a mainstream product in Ireland in 2019. Banks are offering borrowers lower interest rates to incentivise households to invest in energy efficiency. In Ireland, energy efficiency is monitored by the Building Energy Rating (BER) labelling system, which audits property performance from “A” (most efficient) to “G” (least).[5] Green mortgages are directly linked to this system, with most banks requiring a minimum B3 BER to get access to a reduced mortgage rate.

[5] Going Green, The growth in Green Mortgage financing in Ireland https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/going-green-the-growth-in-green-mortgage-financing-in-ireland.pdf

As detailed below the housing stock in the Fethard-On-Sea SEC is 99% individual units consisting of a mixture of detached, semi-detached and terraced housing units. This can be advantageous when dealing with the retrofitting of the units as individual units can be retrofitted one at a time, whereas flats/apartments may need to be retrofitted as a complete building.

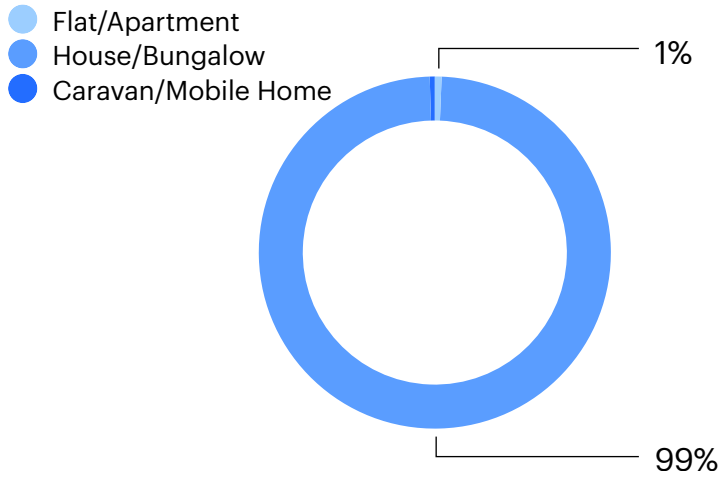


Figure 4 - Housing Type

HOUSING STOCK AGE PROFILE

The housing stock in Fethard-On-Sea SEC is a mixture of old and new housing stock as detailed in Table 7 below.

	Fethard-On-Sea SEC		National Averages	
Period	No. of homes	% of homes	No. of homes	% of homes
Pre 1960	158	24.5%	4,00,354	21.8%
1961 - 1980	69	10.7%	347,418	18.9%
1981 - 2000	189	29.3%	452,742	24.6%
Post 2000	198	30.7%	593,105	32.3%
Not stated	31	4.8%	43,109	2.3%
Total	645	100%	1,836,728	100%

Table 7 Construction period

As can be seen from Table 7, 31% of the housing stock in the catchment area was constructed after 2000 and would be considered to be modern housing stock where retrofit measures consisting of cavity wall insulation, attic insulation and heating system improvements can be promoted.

Housing which was constructed prior to the introduction of the building regulations in 1992 may be constructed with solid wall or hollow block construction and due to a lack of a suitable cavity may only be suitable for Internal wall insulation (IWI) or external wall insulation (EWI). Attic insulation will still be a suitable option for these house types.

HOME HEATING FUEL MIX

An analysis of the type of fuels used to heat the housing stock (Fuel Mix) is illustrated in Table 8. This provides a breakdown of the percentage of different fuel types consumed within the catchment area and is used to determine the Carbon Footprint[6] of the community. The community can significantly reduce its carbon footprint by transitioning its fuel mix away from fossil fuels towards low or neutral CO2 producing fuel sources.

Within Fethard-On-Sea SEC, Oil fired central heating is the main fuel consumed at 67%. This is followed by Coal at 9%. Fethard-On-Sea is not on the national gas network, therefore this is not a significant fuel source within the community.

	Fethard-On-Sea SEC		National Averages	
Type of Heating	No. of homes	% of homes	No. of homes	% of homes
No central heating	20	3.1%	21254	1.2%
Oil	433	67.1%	714177	38.9%
Natural Gas	8	1.2%	601339	32.7%
Electricity	55	8.5%	216075	11.8%
Coal	57	8.8%	63437	3.5%
Turf	1	0.2%	67891	3.7%
LPG	8	1.2%	11874	0.6%
Wood	20	3.1%	31854	1.7%
Other	3	0.5%	16916	0.9%
Not stated	40	6.2%	91911	5.0%
Total	645	100%	1836728	100%

Table 8 Percentage fuel mix within catchment area (CSO, 2022)

[6] Carbon footprint measures the carbon emissions linked to a particular activity or product. It includes emissions involved in all stages of making and using a product or carrying out an activity. The lower the carbon footprint the less that a product or activity contributes to climate change.

	Fethard-On-Sea SEC	
Heating Type	Emissions tCO2e	Percentage
No central heating	73.3	3%
Oil central heating	1586.6	73%
Natural gas	22.5	1%
Electricity	0.0	0%
Coal (incl. anthracite)	269.6	12%
Peat (incl. turf)	4.9	0%
Liquid Petroleum Gas (LPG)	63.7	3%
Wood (Inc. wood pellets)	0.0	0%
Other	10.7	0%
Not Stated	142.7	7%
Total	2174	

Table 9 Percentage emissions in in tCO2e (CSO, 2022; SEAI, 2023)

As indicated in Table 8, Oil and Coal make up 76% of the fuel mix within the catchment area, however as can be seen in Table 9, these two combined fuel types make up 85% of the CO2 emissions.

RESIDENTIAL HOUSING BUILDING ENERGY RATING ANALYSIS

The SEAI research database of Residential BER certificates within Fethard-On-Sea SEC catchment area indicates that 49% of the residential housing stock has an active BER certificate. The average BER rating for the catchment area is 244(kWh/m2/year) with a BER Category D1.

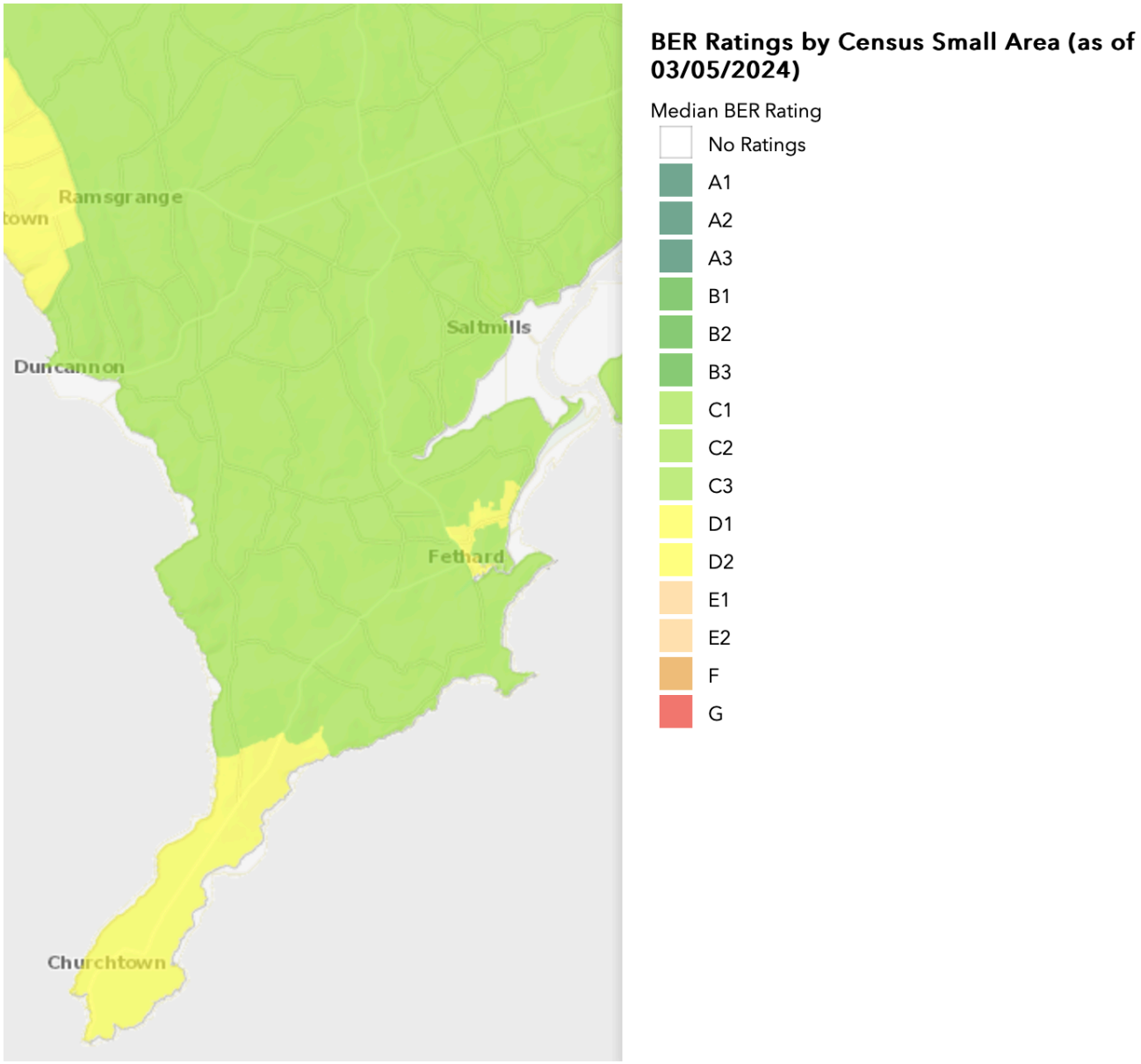


Figure 5 Building Energy Rating information 2024.

Note: The areas highlighted in Green within Fig 5 above, associated with higher ratings, may be attributed to newer housing houses with a greater number of BER certificates

being issued. The yellow areas indicate that the median areas of the catchment area have a BER rating of D1.

Within the catchment area of the Fethard-On-Sea, of the homes identified within the census data, 49% have a BER certificate with 13% recording a BER of B or greater. Figure 6 provides a breakdown of the BER ratings of the homes which have been surveyed.

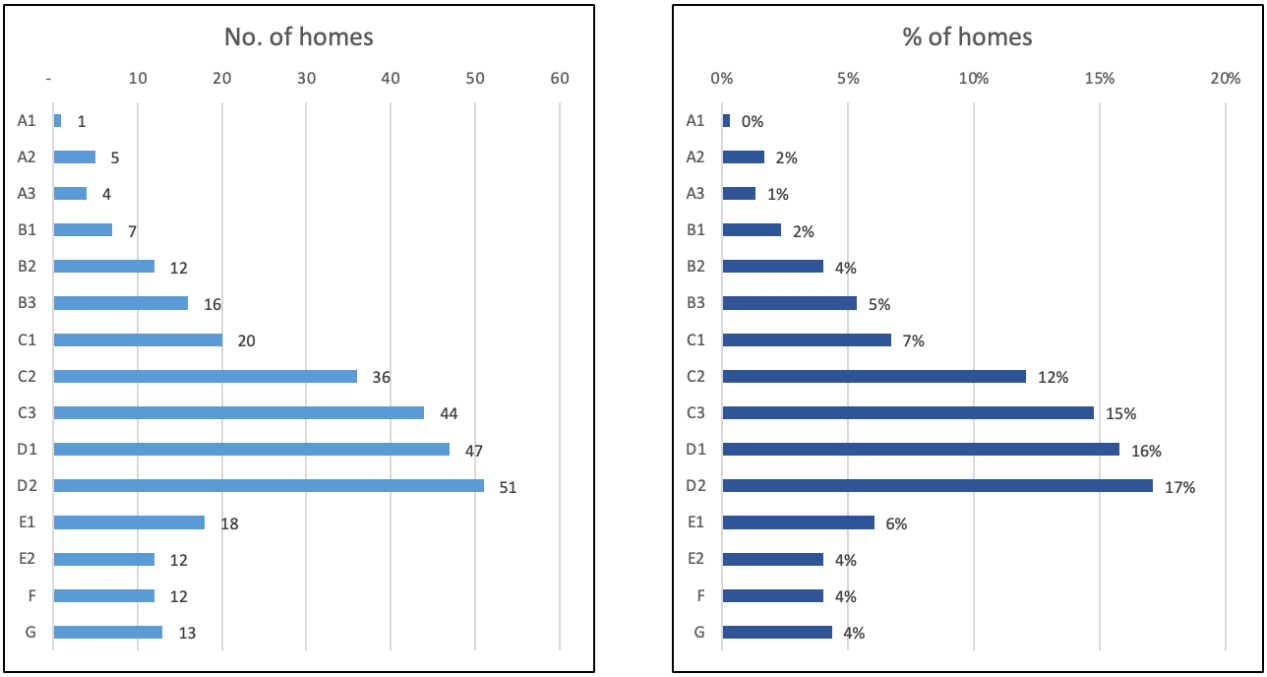
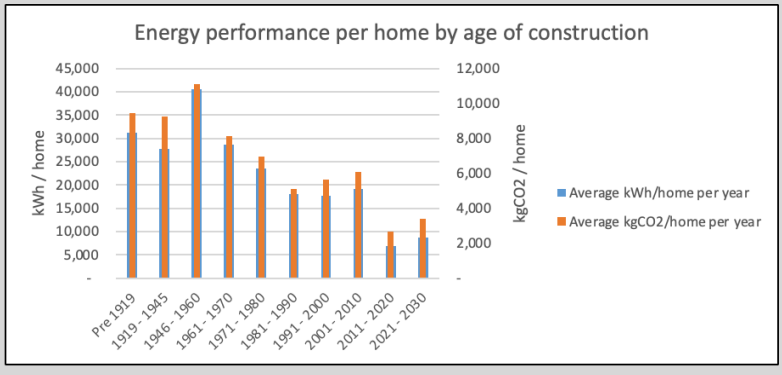


Figure 6 - BER Breakdown

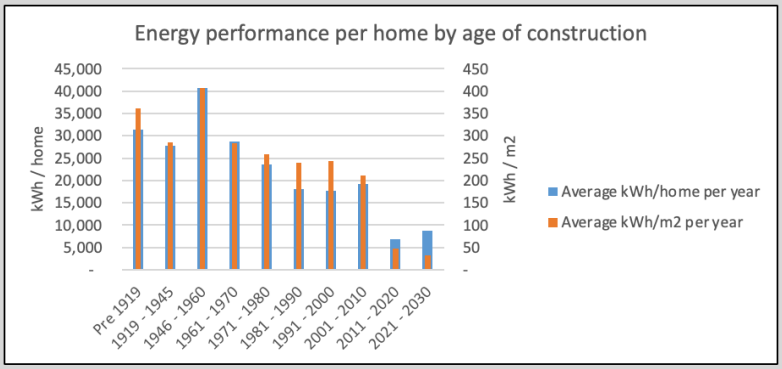
As discussed earlier within this report, the Government has a national target of increasing the energy rating of 500,000 houses within the national housing stock to a B2 or greater by 2030. It should be noted that although 91% of the housing stock with a BER rating is less that B2, approximately 39% lies between B3-C3, which indicates that the housing stock can be brought up to B2 without the requirement for deep retrofit.

The following tables and graphs illustrate the energy performance of the homes with BER certificates within the catchment area based on Average kgCO2/home per year, Average kg/C02/m2 per year and Average Energy Cost per Home depending on the age category of the houses.

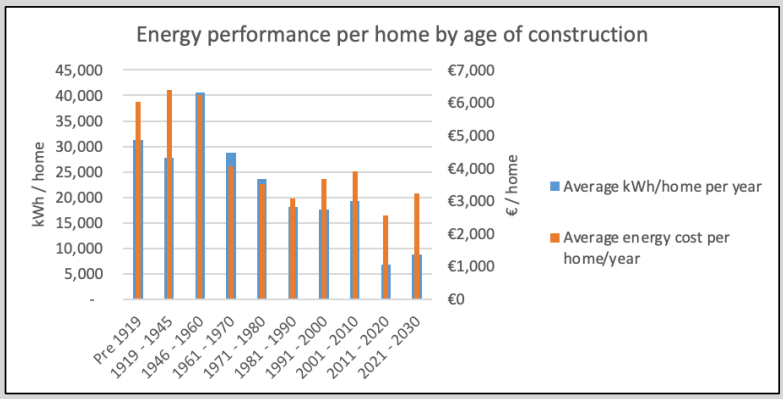
Age of construction of homes	Average kWh/home per year	Average kgCO2/home per year
Pre 1919	31,309	9,463
1919 - 1945	27,716	9,231
1946 - 1960	40,638	11,116
1961 - 1970	28,690	8,116
1971 - 1980	23,553	6,948
1981 - 1990	18,042	5,120
1991 - 2000	17,696	5,632
2001 - 2010	19,219	6,090
2011 - 2020	6,885	2,674
2021 - 2030	8,768	3,424



Age of construction of homes	Average kWh/home per year	Average kWh/m2 per year
Pre 1919	31,309	361
1919 - 1945	27,716	286
1946 - 1960	40,638	408
1961 - 1970	28,690	283
1971 - 1980	23,553	259
1981 - 1990	18,042	239
1991 - 2000	17,696	243
2001 - 2010	19,219	211
2011 - 2020	6,885	47
2021 - 2030	8,768	31



Age of construction of homes	Average kWh/home per year	Average energy cost per home/year
Pre 1919	31,309	€6,019
1919 - 1945	27,716	€6,381
1946 - 1960	40,638	€6,231
1961 - 1970	28,690	€4,071
1971 - 1980	23,553	€3,524
1981 - 1990	18,042	€3,088
1991 - 2000	17,696	€3,685
2001 - 2010	19,219	€3,915
2011 - 2020	6,885	€2,547
2021 - 2030	8,768	€3,244



Sample Building Energy Rating Recommendations

As part of the development of the Energy Master Plan, 10 domestic dwellings were selected for a Technical Assessment Report by a qualified BER assessor. The buildings were analysed to determine what works would be required to uplift the BER rating of the properties to an A2 standard. These reports have been anonymised and are attached as Appendix A.

RESIDENTIAL ENERGY BASELINE

The residential sectors energy baseline has been calculated using the CSO's Small Area Plans statistics from the 2022 census which was carried out in April 2022 and released in September 2023.

SEC Residential Energy, CO2 and Spend				
	Electricity	Fossil Fuel	Renewable	Total
Total Primary Energy (kWh)	5,475,232	8,705,895	305,470	14,486,597
Total CO_2 (tonnes)	1,620	2,414	0	4,033
Total Spend	€741,894	€1,055,690	€30,269	€1,827,854

Table 10 Residential Energy[7], CO_2 and Spend (CSO, 2022)

[7] This table refers to the SEC's Total primary energy requirement (TPER). TPER is a measure of your energy consumption that also accounts for the energy that is consumed and/or lost beyond the boundary of the SEC, notably in generating and distributing the electricity that you use.

Homeowners seeking to enhance their Building Energy Ratings (BERs) can take advantage of financial incentives offered by the Sustainable Energy Authority of Ireland (SEAI) in the form of grants and support.

Detailed information on these incentives is available at the conclusion of the report. Providing support to homeowners throughout the application process is essential to ensure they invest in measures that suit their homes.

While the upfront costs of many retrofit measures aimed at improving a home's energy efficiency may seem daunting, especially for lower-income groups and landlords, SEAI's new 'National Retrofitting Scheme' has made home upgrades more attainable than ever before. For instance, homeowners can now access grants covering up to 80% of the standard cost for attic and cavity wall insulation, capped at €3,200. These measures have proven to significantly enhance energy efficiency in typical Irish homes and should be within financial reach for most homeowners in Fethard-On-Sea SEC.

Moreover, the Warmer Homes Scheme offers free energy upgrades for eligible homeowners facing the highest risk of energy poverty. A budget of €148 million has been allocated for the scheme in 2023. It targets the least energy-efficient properties, giving priority to homes constructed and inhabited before 1993 with a pre-works BER rating of E, F, or G. Applications are also open to qualifying homeowners who previously received assistance under the scheme but could still benefit from further improvements.

Analysis of buildings within the Fethard-On-Sea catchment area which have a Building Rating Energy Assessment (BER).

Building fabric - Analysis of U-values

NOTE: For insulation, U-values should be as low as possible.

U-values in roofs

SEAI Code of Practice target U-value **max 0.16 W/m2.K**

S.R.54 indicates 100 mm quilt insulation between joists = 0.4 W/m2.K

Upgrading to 300 mm quilt insulation between joists = 0.13 W/m2.K

% of homes with less than optimal roof insulation (U > 0.16 W/m2.K)	**79%**

U-values in walls

SEAI Code of Practice target U-value **max 0.35 W/m2.K**

S.R.54 indicates U-value 0.6 W/m2.K for cavity wall indicates only partial fill of 40mm to 50mm.

Cavity walls with no cavity insulation, U-value will generally be in excess of 1.6 W/m2.K

Min upgrade to full cavity fill, typically achieves U-value = 0.32 W/m2.K

Greater improvements can be achieved with either EWI or IWI

% of homes with less than optimal wall insulation (U > 0.35 W/m2.K)	**66%**

U-values in windows

SEAI Code of Practice target U-value max 1.4 W/m2.K
S.R.54 indicates double glazed, metal frame, 6mm gap, typical U-value 3.7 W/m2.K
Double glazing units will typically have U-values of 1.2 to 3.7 W/m2.K, depending on condition
Triple glazing can typically achieve U-values < 1.0 W/m2.K

% of homes with less than optimal window units (U > 1.4 W/m2.K)	**97%**

U-values in floors

SEAI Code of Practice target U-value max 0.36 W/m2.K,
or 0.15 W/m2.K where underfloor heating is installed
S.R.54 indicates concrete slab on 10mm to 15mm rigid insulation, typical U-value 0.57 W/m2.K
Concrete slab on 70mm rigid insulation, typical U-value 0.25 W/m2.K

% of homes with less than optimal floor insulation (U > 0.36 W/m2.K)	**85%**

Heating systems

Guidance notes

A serviced condensing oil/gas boiler will have efficiency > 90%
Heating system efficiency < 70%: May indicate poor condition & non-condensing boilers
Heating control category = 1: Indicates poor system controls in place
Heating system efficiency > 200%: Indicative of heat pump systems

% of homes with poor heating system efficiency (<70%)	**6%**

% of homes with poor heating system control	**43%**

% of homes with heat pump systems	**3%**

Heat pump readiness

The Heat Loss Indicator (HLI) is an important factor in determining heat pump readiness.
The HLI takes into account the both the fabric and ventilation heat loss for the home and is expressed in units of W/K.m2, in the following ranges:

HLI > 2.3: Home is not heat pump ready and requires further insulation and/or airtightness measures
HLI > 2.0 and < 2.3: Home maybe suitable for a heat pump subject to other checks
HLI ≤ 2.0: Home is heat pump ready

% of homes with HLI > 2.3	70%
% of homes with HLI >2.0 to 2.3	24%
% of homes with HLI ≤ 2.0	5%

Deep Measures

% of homes with less than optimal Window Units (U > 1.4 W/m2.K) **97%**

% of homes with Heat Pump Systems **3%**

Mechanical ventilation can improve energy efficiency and improve indoor air quality

Solar PV can provide clean electricity to the home

Shallow Measures

% of homes with less than optimal Roof Insulation (U > 0.16 W/m2.K) **79%**

% of homes with less than optimal Wall Insulation (U > 0.35 W/m2.K) **66%**

% of homes with Poor Heating **6%**

% of homes with Poor Heating **43%**

Heat pump readiness

% of homes that are heat pump ready (HLI ≤ 2.0)	5%
% of homes that may be heat pump ready with more checks (HLI > 2.0 and ≤ 2.3)	24%
% of homes that need more fabric and airtightness measures for a heat pump (HLI > 2.3)	70%

ENERGY IN TRANSPORT

The Governments Climate Action Plan 2023 (CAP23) has outlined a target to transform how we travel across the island of Ireland, by setting a target of a 50% reduction in emissions from transport by 2030. The government has indicated that it will drive policies to reduce transport emissions by improving our town, cities and rural planning, and by adopting the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles.

Within CAP23 the following measures will be promoted:

- Change the way we use our road space.
- Reduce the total distance driven across all car journeys by 20%
- Walking, cycling and public transport to account for 50% of our journeys.
- Nearly 1 in 3 private cars will be an Electric Vehicle.
- Increase walking and cycling networks.
- 70% of people in rural Ireland will have buses that provide at least 3 trips to the nearby town daily by 2030.

In 2022 the transport sector was responsible for 19.1% of Ireland's greenhouse gas emissions.[8]

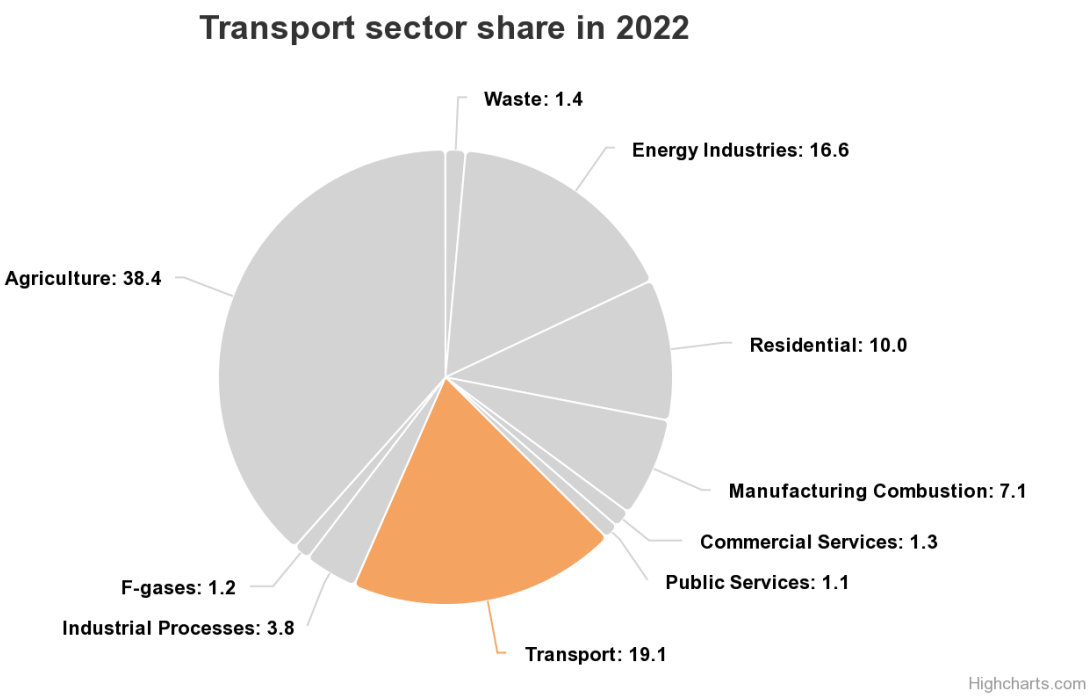


Figure 7 Ireland's Greenhouse emissions 2022

[8] https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/transport/

Passenger cars were responsible for approximately 53% of road transport emissions and significant challenges remain within the transport sector, given that the population and overall transport fleet is projected to grow. Trends indicate that emissions from transport are strongly coupled with economic activity and levels of employment.

It is clear to achieve the governments CAP23 targets that a transition towards more sustainable forms of transport is required. To realise this transition, many different modes of transport will be required. These modes of transport will range from safe and accessible walking and cycling routes within urban areas, appropriate regular public transport links which can serve the populations within the hinterland of towns and villages and the installation of appropriate infrastructure to support the electrification of private cars.

The impact of the COVID-19 pandemic which resulted with the introduction of travel restrictions and significant uptake of remote working practices (where viable) resulted in a reduction of approx. 16% of transport emissions compared in 2020 when compared to 2019. This forced change in work practices has illustrated that large scale behavioural change is achievable and that new patterns of mobility and working can play a part in the transition to a more sustainable transport system.

In 2023 emissions from transport have rebounded to 95% of the pre-covid levels, however 19% of new car registrations were electric in 2022, with 72,000 electric vehicles currently within the national fleet.

METHOD

An analysis of means of transport for workers and students within Fethard-On-Sea SEC's catchment area was carried out based on the CSO 2022 census and SEAI emissions data. Based on this analysis the transport associated spend and associated CO2 emissions for the catchment area were calculated.

RESULTS AND ANALYSIS

As detailed in Table 11, private car ownership dominates the primary method of transport in the Fethard-On-Sea SEC catchment area.

	Fethard-On-Sea SEC		State	
Commuting to work	No. of people	% of total	No. of people	% of population
On foot	27	3.7%	178,111	7.8%
Bicycle	2	0.3%	60,671	2.6%
Bus, minibus or coach	9	1.2%	119,095	5.2%
Train, DART or LUAS	2	0.3%	60,885	2.7%
Motorcycle or scooter	1	0.1%	8,481	0.4%
Car driver	429	59.0%	1,199,481	52.3%
Car passenger	28	3.9%	84,666	3.7%

	Fethard-On-Sea SEC		State	
Van	84	11.6%	146,265	6.4%
Other (incl. lorry)	10	1.4%	12,744	0.6%
Work mainly at or from home	95	13.1%	259,467	11.3%
Not stated	40	5.5%	163,872	7.1%
Total	727	100%	2,293,738	100%

Table 11 Primary forms of transport used to commute to work (CSO, 2022)

Based on the information collected as part of the 2022 census, the use of Public Transport such as buses within the catchment area for commuting to work is 1.2%. This indicates a significant challenge which all most all rural towns in Ireland experience, which is a lack of consistent viable public transport.

It should be noted that active transport in the form of walking and cycling within the catchment area is greater than half the national average with 4% of the population indicating that they walk or cycle to work. Active transport within rural areas can be complex due to restricted shared space for vehicles and bikes/walkers. However, active travel can be support through the introduction to dedicated walking and cycling infrastructure within the catchment area. This is significant where tourism acts as a significant industry within the catchment area. Cycling tourists can have a very positive impact on the local economy and do not cause as much disruption as car based tourists.

	Fethard-On-Sea Vision 2025 SEC		State	
Commuting to school or college	No. of people	% of total	No. of people	% of population
On foot	27	6.5%	278,180	21.1%
Bicycle	7	1.7%	36,541	2.8%
Bus, minibus or coach	142	34.2%	204,828	15.5%
Train, DART or LUAS	4	1.0%	24,431	1.9%
Motorcycle/scooter	0	0.0%	669	0.1%
Car driver	28	6.7%	54,938	4.2%
Car passenger	172	41.4%	606,378	45.9%
Van	1	0.2%	2,558	0.2%
Other (incl. lorry)	0	0.0%	1,348	0.1%
Work mainly at or from home	5	1.2%	7,259	0.6%
Not stated	29	7.0%	102,540	7.8%
Total	415	100%	1,319,670	100%

Table 12 Commuting to school or college.

The use of active transport in the form of walking within the school going population is also below the national average, however this is not surprising based on the size of the catchment area. The number of students cycling to school is low however and this is an element that Fethard-On-Sea SEC should analyse further through a survey of the student body to determine what the barriers are to the use of cycling as a form of active transport.

The development of dedicated safe cycling routes within our towns and villages has improved over the past number of years, however many of these measures can be just the remarking of existing road infrastructure which does not always provide for a safe or enjoyable cycling experience. In addition to road infrastructure, the development of storage infrastructure at the schools may also be required to encourage students to commute by bike. With almost 41% of students traveling to and from school by car, this generates a significant volume of road traffic and reduces the ability of workers to commute to work by bike or foot.

To increase the rate of Active travel by students the SEC could look to seek funding or grants in order to improve the active travel infrastructure in their community so that walkways and cycle paths are safer for students. For example the safe Routes to School (SRTS)[9] programme launched in 2021 and was open to all schools to apply for active travel funding and delivery. This programme is currently closed however a new call for participants may be opened in 2024.

[9] https://www.nationaltransport.ie/publications/safe-routes-to-school-design-guide/

Energy Consumption from Transport

An analysis of transport related energy consumption was carried out for the Fethard-On-Sea SEC catchment area. The analysis was based on a statistical analysis of vehicle ownership along with vehicle type and associated carbon emissions[10]. As previously discussed 70% of commutes are by private cars or vans.

Based on the information on vehicle ownership within the catchment area, it is possible to calculate the energy consumption and carbon associated emissions for the transport sector. A national breakdown has been used to calculate energy consumption and emissions (56.9% diesel, 42.7% petrol, 0.4% Battery Electric Vehicle (BEV)) based on national average km travelled.

		National average annual km	kWh/km (TPER)	gCO2/km
	Petrol	12,113	0.73	167
Car	Diesel	19,681	0.70	167
	BEV	12,958	0.38	65
Motorcycle		2,741	0.41	94
Van		19,787	1.01	243
Truck		44,671	3.47	832

Table 13 Private Vehicle Transport Energy and CO_2,, Impacts (CSO 2022, CODEMA 2019)

Based on this information and values, a conservative estimate of energy used in private transport is show in Table 14 below. These figures are calculated based on private vehicle ownership, vehicle fuel type and averaged national travel distances.

SEC Transport Energy, CO2 and Spend				
	Electricity	Fossil Fuel	Renewable	Total
Total Primary Energy (kWh)	84,497	7,485,546	562,962	8,133,004
Total CO_2 (tonnes)	14.45	1,916	0	1,930
Total Spend	€14,956	€1,418,600	€99,644	€1,533,200

Table 14 Transport Energy, CO2 and Spend.

[10] The renewable portion of the fuels has been taken as follows: renewable content of electricity consumed (40% in 2020), 5% of petrol consumption and 7% of diesel consumption (as per the Biofuels Obligation Scheme).

SWITCH TO ELECTRIC VEHICLES

An analysis if the impact of changing 40% of the existing private vehicle to battery electric vehicles (BEV) is detailed in Table 15.

SEC Transport Energy, CO2 and Spend - 40% BEV				
	Electricity	Fossil Fuel	Renewable	Total
Total Primary Energy (kWh)	844,965	5,733,938	466,259	7,045,162
Total CO_2 (tonnes)	145	1,459	0	1,604
Total Spend	€149,559	€1,086,962	€82,528	€1,319,048

Table 15 Transport Energy, CO2 and Spend based on 40% BEV private car fleet.

The results in Table 15 indicates that a CO2 reduction of 327 tonnes and a reduction in energy spend of approximately €214,151 annually. These are savings which can be recirculated within the local community, rather than leaving the community.

A significant increase in the range of electric vehicles (EV) has made this mode of transport more suitable for use in rural communities. According to the EPA, 19% of new car registrations in 2022 were Electric Vehicles, which has increased the national fleet of EV's to 72,000. However, this is less than 8% of the 2030 national policy target of 944,600 vehicles. A very significant change is car ownership types will be required to bridge this gap over the next 6 years along with a significant increase in the associated infrastructure to support the role out of EV's at this scale.

The key benefit for the user is the reduced operational costs associated with using electricity to fuel the car when compared to petrol or diesel.

Comparison of CO_2 impacts and fuel costs based on 250km per week		
Vehicle	Weekly fuel cost	Weekly gCO2
Electric e.g. Nissan LEAF	€9.84	13,800
Volkswagen Golf (Petrol)	€33.40	41,750
Volkswagen Golf (Diesel)	€35.51	28,000

Table 16 Comparison of CO2 impacts and fuel costs based on 250km per week
(SEAI, 2022; Bonkers.com, 2022)

Fethard-On-Sea SEC should consider a public EV awareness event to promote the suitability of electric vehicles within the community. Whilst the one-off purchase cost can be more expensive than a fossil fuel car, electric vehicles are significantly cheaper to run, with SEAI reporting running costs for a diesel car as €1000 more expensive annually than an electric vehicle[11]. Families owning two vehicles should contemplate acquiring a

[11] https://www.seai.ie/technologies/electric-vehicles/why-drive-electric/cost-savings/

compact electric vehicle in addition to their primary car, especially for shorter trips, as an initial step towards adopting electric vehicles.

SEAI provides a series of supports to incentivise the transition from fossil fuel-based vehicles towards electrical vehicles. Appendix A outlines details of the savings.

Nevertheless, it is recognised that investing in an electric vehicle (EV) remains a considerable expense and may exceed the financial means of many individuals.

While we anticipate the rapid expansion of the 'second-hand' EV market over the next five years, in the interim, Fethard-On-Sea SEC should prioritise the implementation of the '**Avoid-Shift-Improve' (ASI)** model for community transportation.

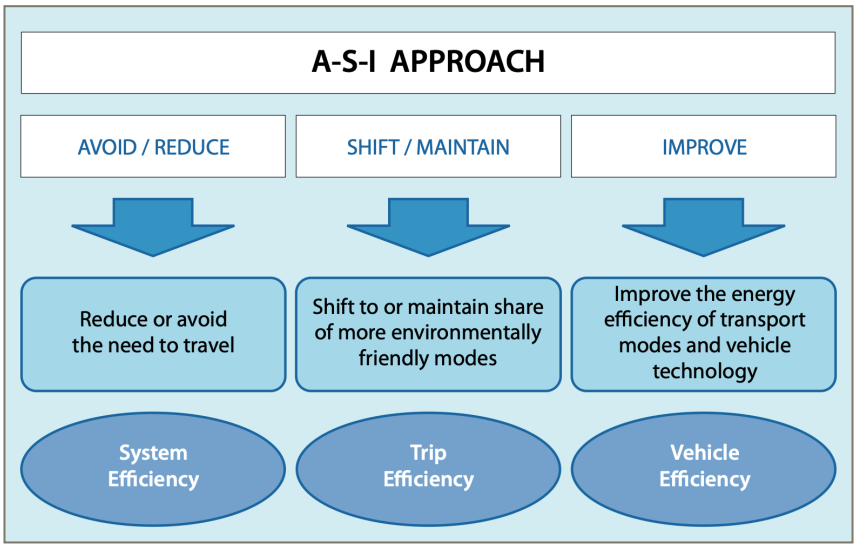


Figure 8 - A-S-I Approach

Until the cost of EV's becomes more accessible, it is important for communities to embrace the ASI model and persist in its application even as the second-hand EV market matures.

It's essential to recognise that EV's alone will not suffice to decarbonise the transportation sector.

E-BIKES

Electric bicycles (e-bikes) have surged in popularity within urban settings over the past decade, emerging as a viable alternative for shorter journeys (<5km) compared to more traditional modes of transportation. Essentially, an e-bike is equipped with an electric motor. These bikes come in various types, ranging from those with a minor motor assist to bolster the rider's pedal power, to more robust models that offer power-on-demand without the need for peddling.

While e-bikes can be purchased by individuals from retailers, their widespread adoption is largely credited to private companies offering dock-less shared schemes. In these initiatives, private firms provide e-bikes and e-scooters for short-term rentals. Typically

“dock-less," these vehicles lack fixed locations and are instead picked up and dropped off at designated spots within the service area.

In Fethard-On-Sea, a bike share rental scheme is not currently in operation and due to the size of the resident population a commercial scheme would not be viable. However a tourism driven e-bike and push bike scheme could provide a commercial basis for the provision of E-Bikes within the community and get tourists to transition from cars to bikes in the village which will reduce congestion along the coast roads and provide an income source into the community.

A notable example to draw inspiration from is the Mulranny SEC, which recently launched a community e-bike rental scheme. What sets this initiative apart is its use of electricity generated from solar PV panels with battery storage to charge the e-bikes. Fethard-On-Sea, like Mulranny, could leverage renewable energy sources for similar schemes, especially when developing active travel schemes and routes around the village of Fethard-On-Sea.

Implementing a comparable scheme in Fethard-On-Sea, whether through community ownership or private partnership, could reduce emissions associated with short journeys by car, reduce traffic congestion within the coastal roads and open up a new tourism offering. Encouraging cycling, investing in bicycle infrastructure, and promoting e-bike usage could foster intergenerational cycling habits.

Figure 9 - Dock-less Battery Assist Bikes

REMOTE WORKING

As previously discussed, COVID-19 significantly changed the percentage of individuals working remotely (where possible). According to the CSO Census 2022, 13% of the working population in the SEC catchment area work from home.

However, national research published by National University Ireland Galway and the Whitaker Institute[12] in 2022 under the National Remote Working Survey 2022 indicates that of the 8,428 respondents who could work remotely, 52% were currently working hybrid, 40% fully remote and only 8% were fully on site. The report also indicated that 95% believe that working remotely (where possible) makes life easier.

With this significant increase in many office based jobs working a hybrid model, there is an opportunity to achieve a 40% reduction in work associated commutes by working 2 days a week from home or a local work hub. This could result in significant progress in reducing transport emissions by 50%.

Figure 10 - 2022 National Remote Working in Ireland Employee Survey

[12] http://whitakerinstitute.ie/project/remote-working-during-covid-19-irelands-national-survey/

NON-RESIDENTIAL SECTOR

BACKGROUND

As detailed earlier in the Governments CAP23 targets, the Greening of Business and Enterprise within the country will result in a 35% reduction in the emissions from industry and enterprise. As with the other sectors of the economy, business and enterprise will need to go through a period of transition to decarbonise their energy consumption.

Businesses are being encouraged to identify within their own businesses where they are consuming energy and to identify opportunities for investment in behavioural change, energy efficiency measures and sustainable energy alternatives.

Many SME businesses are too small to have a dedicated energy manager on staff and are often too busy running the operation to have a clear overview of how they are consuming energy and what it is costing them. It is our experience auditing SME businesses throughout Ireland, that often the utility bills for the business are dealt with by the accounts department and just paid when due without any analysis of where the consumption is arising. Therefore there is often a disconnect between the people and processes using energy and those responsible for its payment.

For this reason, an important theme within these reports is the establishment of a baseline of information on energy consumption (where, when) within a business. Once a baseline has been established, it is important that employee's and building users are engaged and trained on good energy management practices which can contribute towards energy savings. Providing information and creating energy champions within businesses has been seen as a successful model.

Figure 11 Commercial/ Non-Domestic Buildings distribution within Fethard-On-Sea SEC. Yellow Dots.

METHOD

Commercial/business within the catchment area were identified and classified using data from the Valuations Office, which is now part of Tailte Éireann using geographic information systems (GIS). This information specific to the catchment area was cross referenced with commercial address data within the catchment area to determine the floor area of different categories of businesses. The energy consumption within the SEC catchment was carried out using CIBSE TM46 Energy Benchmarks in conjunction with the Valuations Office datasets and SEAI's 'Extensive Survey of Commercial Building Stock in Ireland',

In addition to the high-level analysis carried out to determine the energy and CO2 footprint for the non-domestic sector a number of commercial premises where audited to ASHRAE Level 1 to identity opportunities within the premises for energy efficiency measures. The ASHRAE Level 1 audit consisted of an analysis of the businesses utility bills, a walk through audit of the premises heating and electrical systems. Following on from the site visit and discussion with the business owner, a report was prepared which outlined opportunities which could contribute to a reduction in the energy consumption on site. These recommendation where under the following categories: 1) behavioural change 2) energy efficiency 3) renewable energy

The premises audited are detailed in the following list and reports were issued to each of the businesses premises.

- Bevel Furniture
- Wheelhouse Cafe
- Londis - Dillons
- Norman View Camper Park

RESULTS AND ANALYSIS

The following table provides an overview of the estimated total energy consumption, associated emissions and spend from the non-domestic sector within the SEC catchment area. The development of this baseline for 2024 provides an insight into the level of reduction required within the sector over the coming years in order to achieve the Governments targets set out in the Climate Action Plan. There are 41 commercially rated premises within the catchment area of Fethard-On-Sea as can be seen in Figure 12.

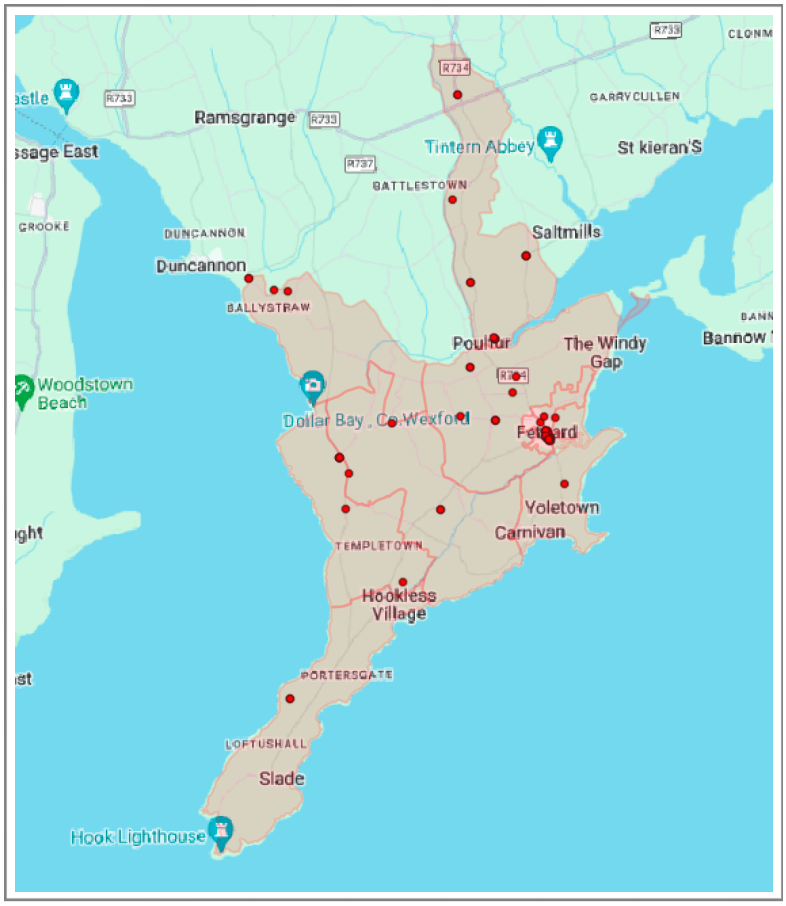


Figure 12 Commercially rated premises in Fethard-On-Sea.

SEC Non-Domestic Energy, CO2 and Spend					
Electricity typical benchmark (MW·h)	Fossil-thermal typical benchmark (MW·h)	Illustrative electricity typical benchmark (tCO2)	Illustrative fossil-thermal typical benchmark (tCO2)	Illustrative total typical benchmark (tCO2)	Illustrative total Energy Spend (€)
493	958	271	182	429	€892,872

Table 17 - SEC Non-Domestic Energy, CO2 and Spend

Supports for Small-Medium Enterprises

There are currently 29 different Government supports for SME's to start on their journey towards reducing their carbon footprint and the following section will outline some of these supports. Supports are also available for businesses to help mitigate against the impact of energy price rises. The following supports have been arranged in under the following Themes.[13]

[13]https://enterprise.gov.ie/en/what-we-do/supports-for-smes/energy-supports/energy-supports-for-business.html

The following table outlines the list of support schemes currently being funded. A complete list including a more detailed description of the support scheme and web links are contained in Appendix A: Grant Streams.

Starting the Energy Efficiency Journey

Planning, Preparation and Training

Improving your business with funding

STARTING YOUR ENERGY EFFICIENCY JOURNEY	
Climate Toolkit 4 Business	Climate Toolkit 4 Business
SEAI Energy Academy	SEAI Energy Academy
Energy audits	Support Scheme for Energy Audits - SEAI
Water conservation for business hub	water conservation for business - Uisce Éireann
EPA resources	greening resources for business
Steps to energy efficiency	Steps to energy efficiency - SEAI
Energy efficiency guide	Energy Efficiency Guide for Retailers (PDF, 23MB)
Green for Business	Green for Business

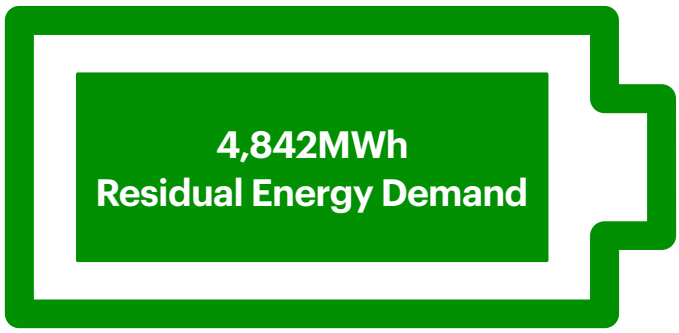
PLANNING, PREPARATION AND TRAINING	
Climate Ready Programme (Skillnet)	Climate Ready: Talent for Ireland's Green Economy - Skillnet Ireland
Innovation Vouchers - Enterprise Emissions Reduction Investment Fund	Innovation Vouchers - Enterprise Ireland
Climate Action Voucher - Climate Planning Fund for Business	Climate Action Voucher
GreenPlus - Climate Planning Fund for Business	GreenPlus

PLANNING, PREPARATION AND TRAINING	
Exploring Innovation Grant – Enterprise Emissions Reduction Investment Fund	Exploring Innovation Grant
Strategic Consultancy Grant - Climate Planning Fund for Business	Strategic Consultancy Grant
GreenStart - Climate Planning Fund for Business	GreenStart - Enterprise Ireland

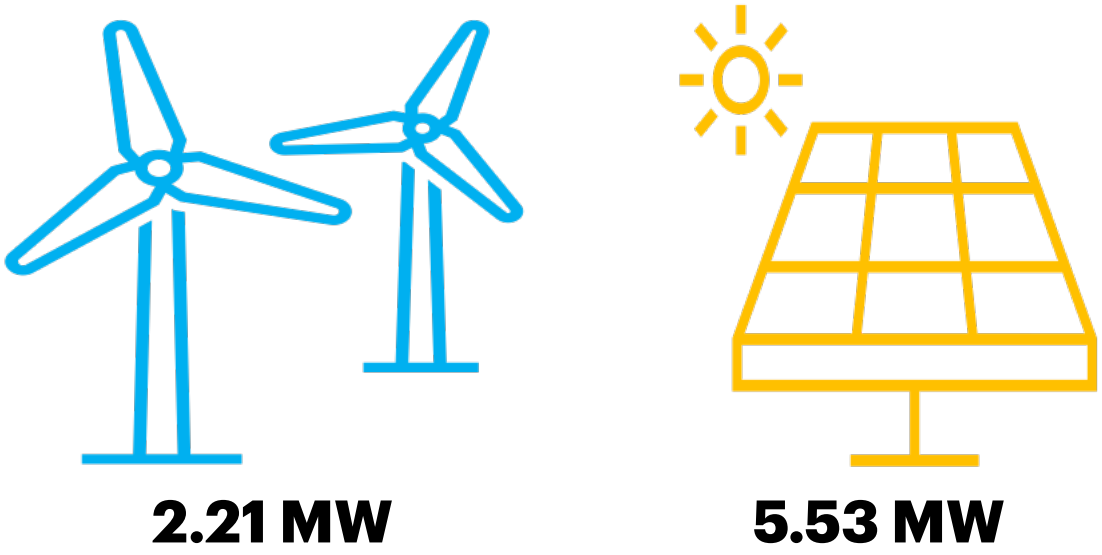
IMPROVING YOUR BUSINESS WITH FUNDING	
Ukraine Enterprise Crisis Scheme	Ukraine Enterprise Crisis Scheme - Enterprise Ireland
Non-Domestic Microgen Scheme	Non-Domestic Microgen Scheme
Energy Efficiency Loan Scheme	Energy Efficiency Loan Scheme - SBCI
EXEED Grant Scheme	EXEED Grant Scheme - SEAI
Support Scheme for Renewable Heat	Support Scheme for Renewable Heat - SEAI
Community Grant	Grants for Sustainable Community Projects - SEAI
Accelerated Capital Allowance	Accelerated Capital Allowance - SEAI
Electric Vehicle Grants (SEAI) – co-funding	Electric Vehicle Grants - SEAI
Energy Contracting Support Scheme	Energy Contracting Support Scheme - SEAI
Energy Efficiency Grant	Energy Efficiency Grant
Agile Innovation Fund - Enterprise Emissions Reduction Investment Fund	Agile Innovation Fund - Enterprise Ireland
Research, Development and Innovation (RD&I) Fund - Enterprise Emissions Reduction Investment Fund	Research, Development and Innovation Fund - Enterprise Ireland
Capital investment for decarbonisation processes – Enterprise Emissions Reduction Investment Fund	Capital investment for decarbonisation processes
Energy Monitoring and Tracking Systems - Enterprise Emissions Reduction Investment Fund	Energy Monitoring and Tracking Systems (EM & T)

RENEWABLE ELECTRICITY

Through the deployment of energy efficiency measures within the catchment of Fethard-On-Sea SEC, it is possible that a 20% reduction in electricity consumption could be achieved. Based on the high level calculations for the current electricity consumption, a 20% reduction in electrical energy consumption would still leave a residual electrical demand in the catchment area of 4,842 MWh.



In order to offset this residual demand 2.21MW of Wind Power or 5.53 MW of Solar Power would be required to service the catchment area.



RENEWABLE ELECTRICITY SUPPORT SCHEME

The Government of Ireland has implemented a program known as the Renewable Electricity Support Scheme (RESS)[14], aimed at fostering greater community engagement in renewable energy initiatives. This initiative provides financial backing for renewable electricity projects exceeding 0.5 MW in size within the Republic of Ireland.

RESS operates through an auction-based system, wherein renewable electricity projects compete for capacity and secure a fixed price for the electricity they produce. Such support schemes serve to transition our economy away from fossil fuels towards renewable energy technologies. Governments incentivise community investment in renewables by committing to purchasing electricity at a guaranteed rate over a long-term period, typically around fifteen years.

The state will offer approximately 3,000 gigawatt-hours for auction. Projects are selected based on cost-efficiency, with the most economical bidder securing the first allocation, followed by successive selections until all gigawatt-hours are allocated. Essentially, only the most efficient projects offering the lowest prices are chosen.

Eligible Technologies under the Renewable Electricity Support Scheme (RESS) include:

- Onshore wind turbines/solar thermal/solar PV technology
- Onshore wind turbines/solar thermal/solar PV technology with battery storage
- High efficiency Combined Heat and Power (CHP) boilers fuelled exclusively by waste, biomass or biogas
- Hydroelectric

Before obtaining support through the RESS scheme, all projects must satisfy specific criteria. Community involvement in RESS encompasses three key facets:

- Community-Led Projects
- Community Benefit Funds
- Community Enabling Framework

[14] https://www.dccae.gov.ie/en-ie/energy/topics/Renewable-Energy/electricity/renewable-electricity- supports/ress/Pages/default.aspx

CRITERIA FOR COMMUNITY-LED PROJECTS

To qualify, applications must be submitted in collaboration with a Sustainable Energy Community (SEC), as specified in the Declaration of a Community-Led Project, along with details outlining the relationship between the Applicant and the Sustainable Energy Community. Additionally:

- Project capacity should range from 0.5 to 5 Megawatts.
- The project must be wholly (100%) owned by a Renewable Energy Community (REC), with its primary objective being community benefit (whether environmental, economic, or social) rather than financial gain.
- Participation in the community group should be voluntary and open to all.
- Participation is restricted to individuals residing locally (in close proximity to the RESS project).

COMMUNITY BENEFIT FUNDS

An essential aspect of RESS entails the establishment of a 'Community Benefit Fund' by all projects, aimed at enhancing the broader economic, environmental, social, and cultural welfare of the local community. The government mandates that RESS Projects contribute €2 per Megawatt hour of electricity generated towards this fund, ensuring a tangible annual allocation for community development.

This initiative enables communities to further invest in local renewable energy, energy efficiency measures, and climate action endeavours. For RESS-1 alone, it is anticipated that nearly €4 million in annual payments will be allocated to Community Benefit Funds over a span of approximately 15 years, benefiting communities hosting RESS-1 projects.

As part of the Renewable Electricity Support Scheme, SEAI has developed support and tools for communities who wish to explore the potential for a community owned electricity generation project. These supports are in the form of the “Community Enabling Framework”. This framework provides end to end support for the community in the assessment of the viability of a community owned renewable energy project within in their community. It should be noted that Community-Led projects must meet the following requirements:

(1) at all relevant times, be 100% owned by a Renewable Energy Community (the “Relevant REC”) either by way of (i) a direct ownership of the RESS 2 Project’s assets, or (ii) a direct ownership of the shares in the Generator; and

(2) at all relevant times, 100% of all profits, dividends and surpluses derived from the RESS 2 Project are returned to the Relevant REC.

SEAI have been appointed by the Department of Environment, Climate & Communications (DECC) as the implementation body for this Framework which will provide a range of supports including:

A) **Trusted Intermediary**: this is effectively the RESS community team within SEAI. This is the first place that communities go to seek help with their RESS projects. The contact email is: CommunityRESS@seai.ie

B) **Information warehouse:** SEAI have developed a number of toolkits to help communities understand the RESS journey 35. Toolkits include: onshore wind, solar PV, the planning process and grid connection. There are several more in development. The Toolkits provides a set of guidance modules across a number of different areas (including technology options, business planning, project development stages, setting up an organisation / governance strategy) to support development and delivery of a Renewable Energy project.

C) The **Trusted Advisor** (TA) service from SEAI is now available for communities who want to develop their own electricity generation projects. The TAs will help the SECs through the development stages of a generation project. This will include two free feasibility studies to determine if the community generation project is viable.

D) Financial supports: this is the community RESS enabling grant. The total grant available is 80% of eligible costs up to a maximum of €180,000. Entry to the grant programme is based on the successful completion of the feasibility stage conducted by an SEAI appointed TA from above. The grants can be drawn down in €25,000 tranches on completion of key milestones. A requirement before drawing down the second tranche is the undertaking of a public engagement event to ensure that the generation project is socialised within the community.

RESS SECOND PHASE (LAUNCHED MAY 2024)

The second phase of the Small-Scale Renewable Electricity Support Scheme (SRESS)[15], the export phase, has now been launched. This phase of the electricity support scheme will be a significant improvement in market supports for Renewable Energy Communities and Small and Medium Sized Enterprises (SMEs), with fixed tariffs for these groups established for solar and wind projects between 50kW to 6MW. It complements the microgeneration supports for small projects and competitive auctions for larger projects under the RESS (Renewable Electricity Support Scheme).

[15] https://www.gov.ie/en/press-release/009ce-minister-ryan-announces-launch-of-the-second-phase-of-the-small-scale-renewable-electricity-support-scheme-sress/#:~:text=The Small-Scale Renewable Electricity Support Scheme (SRESS) aims,participation in the energy transition.

SRESS tariffs have been set across six categories – three community rates and three SME rates, covering both solar and wind. The largest supported category, grid scale community solar projects, will receive a guaranteed tariff 20% higher than the average community price in the most recent RESS auction for community projects in 2022.

Initial volumes supported and tariffs will be kept under review to ensure that impacts on energy affordability for households and businesses are limited, and that tariff levels align with project development costs for communities and SMEs. Further volumes will be offered subject to review and uptake levels

SRESS will offer supports for renewable electricity installations which are not as suited to other support measures, such as the utility scale Renewable Electricity Support Scheme (RESS) and the Micro-generation Support Scheme (MSS)

SRESS aims to provide an easier route to market for community projects while also enabling farmers, businesses, and others to maximise their participation in the energy transition.

COMMUNITY RESS DEVELOPMENT JOURNEY	
LEARN	Workshops & Webinars
	Expert Insights
	Case Studies
PLAN	High Level Feasibility Studies
	Detailed Feasibility
DO	Community procures independent consultants for planning, grid, etc.
	SEAI Community Grants available
	Trusted Advisors continue to provide general support

https://www.seai.ie/community-energy/ress/enabling-framework/

RESIDENTIAL SOLAR PV ENERGY REDUCTIONS

On the 5th of October 2022 the Minister for Housing introduced a planning exemption relating to the installation of solar panels. The regulations provide updated provisions regarding planning exemptions for rooftop solar installations. This regulation sets out the various classes of exemptions and the conditions and limitations which apply to these classes.

The classes of exemptions cover: Houses (excluding protected Structures and building in an Architectural Conservation Area), Industrial, light industrial and business premises, agricultural, apartments, educational building, health centre or hospital, recreational or sports facility, place of worship, community facility or centre, library and certain statutory undertaker sites.

This means it is now more attractive for homeowners to install larger Solar PV systems, as the previous planning regulations restricted them to utilising a maximum of 50% of their roof space for Solar PV.

To assess the practical feasibility of Solar PV in the Fethard-On-Sea SEC catchment area, we have made the assumption that approximately 40% of homes in the SEC (258) would be viable for Solar PV installation. Our analysis also presumes ideal roof orientation, featuring a 30-degree tilt on south-facing roofs with minimal overshadowing.

In order to evaluate the practical potential for Solar PV in the Fethard-On-Sea SEC, we have assumed that at least 40% of homes in the SEC (196) will be suitable for Solar PV. We have also assumed optimal roof orientation, with a 30-degree tilt on a South facing roof, with only mild over shading.

Solar PV System Rating	Potential Output MWh/Yr	% of residual electricity demand
2kWp	355	7%
4kWp	709	15%
6kWp	1,064	22%

Table 18 – Solar PV potential based on 40% of homes installed Solar PV

Table 18 above hi-lights the potential that individual Photovoltaic installations on residential properties can have on the energy consumed within a community when installed at a significant scale.

SOLAR MEITHAL (SOLAR PV BUYER'S CLUB)

A method of installing solar photovoltaics in significant numbers has been developed called the Solar Meithal. Started in County Clare with Colm Garvey from the Clare Community Energy Agency: A Solar Meitheal project aims to help groups of homeowners and/or small businesses who want to install Solar PV.

Working together as a group, which is the meaning of 'Meitheal', ensures that we can negotiate as a group with solar PV suppliers/installers, bring prices down and make the whole process easier.

The key stages of developing a Solar Meithael consist of:

1	Initial meeting to introduce the concept hosted by the Sustainable Energy Community (SEC)
2	(SEAI SEC Regional Coordinator) to deliver presentation on benefits of solar PV
3	List of interested homeowners and businesses taken by the SEC on the information night
4	List sent to 2-4 PV contractors to get competitive quotes.
5	Quotes sent to (SEC Regional Coordinator) for analysis
6	Host another information night for homeowners to deliver results of the Meitheal (group discounts etc), and to assist homeowners on how to apply for the SEAI grant.
7	SEC to assist homeowners that could not make the event with the Meitheal results
8	People free to choose their own contractor but there is transparency in the quotes.

SEAI SOLAR PV GRANT

Solar PV system size	SEAI Grant
1 kWp	€800 per kWp up to 2kWp
2 kWp	€1,600
3 kWp	€1,850
4 kWp and above	€2,100

Check current terms at: https://www.seai.ie/grants/home-energy-grants/solar-electricity-grant/

SUSTAINABLE ENERGY ROAD MAP

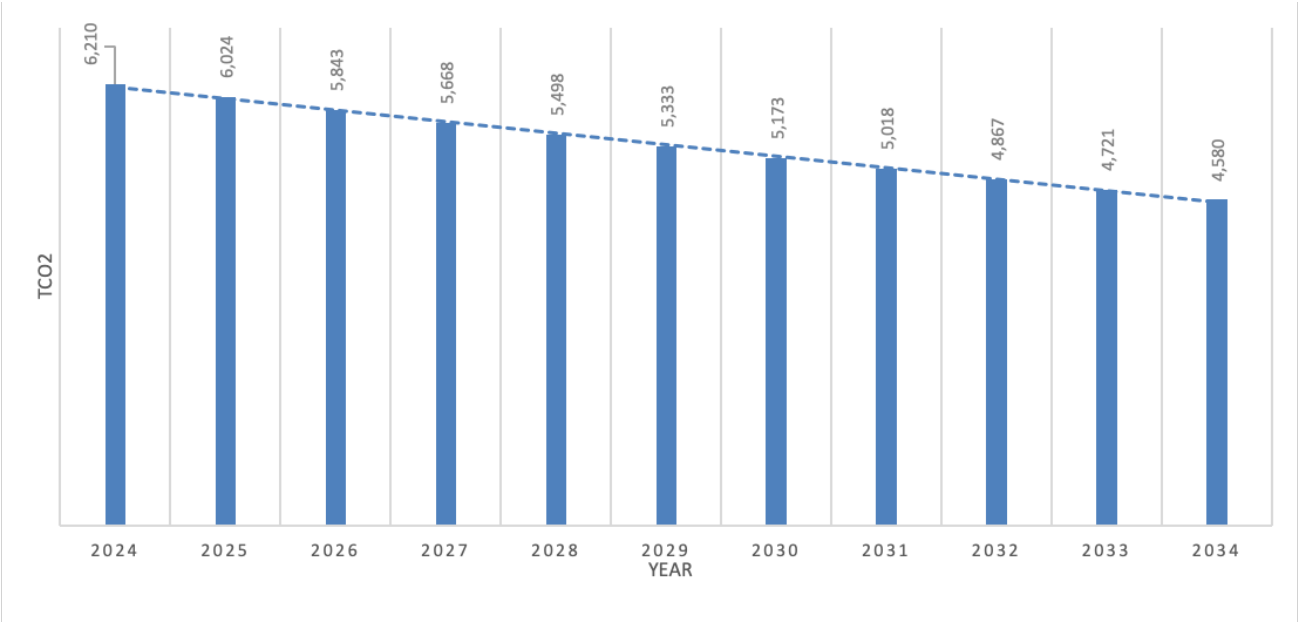
Within the Energy Master Plan, the Sustainability Energy Roadmap is one of the key elements of the report. The Sustainable Energy Road Map outlines the baseline carbon footprint for the community and path to reducing this baseline towards the 2030 reduction targets. The following tables and graphs provides a general high-level path for the SEC to reach its target of 30% reduction in energy consumption and a significant transition towards renewable energy.

Table 19 shows an annual reduction of 3% in the carbon footprint for Fethard-On-Sea SEC catchment Area, which over 10 years from 2024-2034 will result in a reductio of 28% on the current baseline or a reduction of 1,823 tCO2.

Community CO2	
tCO2	6,402
% Annual CO2 Reduction	3%
Year	**tCO2**
2024	6,210
2025	6,024
2026	5,843
2027	5,668
2028	5,498
2029	5,333
2030	5,173
2031	5,018
2032	4,867
2033	4,721
2034	4,580

Table 19 - Annual 3% reduction in Carbon Emissions based on current SEC baseline.

Annual Reduction in Carbon Footprint



Fethard-On-Sea SEC Plan to 2034			
	Number of Projects	Primary Energy Savings (kWh)	CO_2 Savings (tonnes)
Community/Private owned Wind Project in MW	1.8MW	4,841,827	1,432
Electrical Vehicle (EV) Ownership	40% Change	1,087,843	327
Reduction in Car Journeys though remote working & EV Ownership	40% Change	2,818,065	641
Residential Photovoltaic Installations 6kWp	258 Houses	810,000	315
Electrical Vehicle Rental Scheme	2 small EV	1,064,000	
Total		**9,557,735**	**2,715**

Table 20 Fethard-On-Sea SEC Plan to 2034

REGISTER OF OPPORTUNITIES

The Register of Opportunity (ROO) established for Fethard-On-Sea SEC comprises a list of projects under three categories identified within the community.

These categories are:

- Behavioural Change
- Energy Efficiency
- Renewable Energy

Projects in both Behavioral Change and Energy Efficiency, as well as Renewable Energy, have been identified, spanning short- and medium-term timelines. The ROO serves as a comprehensive project-specific planning tool, encompassing details such as project expenses, energy impact, and carbon footprint reductions.

REGISTER OF OPPORTUNITIES						
Project	Scale	Target Application	Comments	Energy Savings	Energy Generation	CO2 Savings
Community Owned Solar project	5MW Solar Projects	Sites within 5km of existing substations with import capacity		4,842Mw	4,842Mw	
Residential Housing Upgrades to B2 Medium Heat Pumps (20% existing housing stock)	130	Existing Housing with Low BER ratings.	Homes with a lower BER which are upgraded will have the greatest energy efficiency impact.			
Electrical Vehicle Ownership	40%	Run test drives and informaiton sessions on the advantages of EV's.	Through the SEC provide the community with test drives of vehicles during a community event to promote uptake	1,088Mw		641

Electrical Charging Stations	2	Lobby local authories to provide mechanisms which support the installation of rapid charging stations at key public locations around the town.	Provision of EV charging stations should be by private operators due to maintaince and insurance barriers.	-	-	-
Reduction in Car Journeys	1	Provision of remote working hubs within the town centre which can be rented to businesses or individuals to support the concept of remote working.	The refurbishment and change of use of existing buildings such as the RIC Barracks within the village of Fethard-On-Sea which could be developed as remote working hubs along as well as an intergenerational community hub.		2,818,Mw	641
Large Scale Residential Photovoltaic installations-Solar Mitheal	258 units	Private residential Housing with correct orientation	The use of buyer clubs and independent technical advisors can significantly reduce the Return on Investment for Solar PV projects and act as a catalyst to bring the community together.		810Mw	315
Electrical Vehicle Rental Scheme	2 small Cars	This will provide uses the opportunity to have access to a private car on demand and act as a low carbon method of transport,	It is recommended that private suppliers such as 'Go" cars are encouraged to setup in small villages to provide free dedicated parking/pickup locations around the village during the tourism season.			

Project	Scale	Target Application	Comments
Electricity Efficieny measures in domestic settings	20% decrease in energy consumption	Entire SEC	Run community events explaining how to identify where energy is being consumed within the home and what solutions can be applied to reduce energy consumption in the domestic setting. Energy Clinics to examine and explain utility bills to members of the SEC and how switching provider can save money. This saved money can then be spent on other energy efficiency measures around the home.
Electricity Efficieny measures in the non-domestic settings	20% decrease in energy consumption	Entire SEC	Run community events for commerical businesses highlighting the energy efficiency schemes which are available to businesses. Engage with SEAI to speak at events arragned by the SEC and invite Solar PV contractors and Energy Auditors to meet the business sector.
E-Bike Scheme	10% reduction is short car journeys	Entire SEC	Encourage local companies to provide a service within Fethard-On-Sea village for the rental of push and battery assist bikes by lobbying the local authority for parking stations within the village centre and park and cycle facilities. This can greatly reduce the level of car related congestion on the local roads and promote Fethard-On-Sea village as launching point to access the surrounding beaches and coastal roads. This will also promote Fethard-on-sea as a point of departure and return, increasing the tourism footfall, but helping to reduce the level of vehicle movements to the beach.
Warmer Homes Scheme		Entire SEC	Run community events explaining how to access the Warmer Homes Grant Application and provide support to applicants in the completion of applications. This can be run as a two part workshop which would consist of a information night outlining the scheme, and followed up by a workshop where interested individuals could be guided through the application process by local mentors.
Active Transport Infrastructure	Safe Cycle/ Walk routes	Poulfur National School	Provide safe routes for cycling and walking to Poulfur National school. This can consist of off road routes which can also provide cycle routes for tourism. Park and Cycle/walk routes to the school can reduce congestion at the school gate and increase safety as well as encouraging active transport initiatives amongst the school population. Having a park and cycle/walk route will also provide individuals from the greater hinterland of Fethard-on-sea

Rural Transport	Local Community	Local Community	In oder to encourage the local community to use alternative forms of transport to private vehicles, alternative forms of transport must be provided. Increasing the level of rural transport to and from Fethard-On-Sea from the larger surrounding towns, can increase the local use of public transport as well as encouraging individuals from local towns to use public transport to access the beaches rather than private vehicles.

ACTION PLAN FOR FETHARD-ON-SEA

COMMUNITY CAPACITY BUILDING

One crucial factor in fostering a thriving Sustainable Energy Community (SEC) lies in cultivating the group's capacity necessary for executing successful projects.

Enhancing the SEC's capabilities boosts their confidence, enabling them to tackle more intricate endeavour's with greater ease. Capacity development can be realised by leveraging mentors assigned by SEAI to organise educational and training programs, collaborating with vocational and tertiary education institutions. Additionally, partnering with established SECs facilitates the exchange of knowledge and experiences, fostering mutual learning and growth.

DISSEMINATION OF INFORMATION

Sharing the Energy Master Plan across the community stands out as a pivotal step for the SEC following its completion. This plan offers insights into the community's existing energy profile and delineates areas where collective efforts should focus to minimise energy consumption and carbon emissions. The report is written in straight forward language so it can hopefully be engaged with by the wider community.

COMMUNITY ENGAGEMENT

The development of a successful Sustainable Energy Community requires engagement with the wider community and other community organisations to identify shared needs. This is especially true for the development of existing community assets for remote working and community education around energy efficiency and renewable energy. The upgrading and reimagining of community buildings such as Fethard-On-Sea Community Hall through BEC grants to provide Education and community engagement facilities, or social hubs feeds into the DO stage of the SEC's plan.

COMMUNITY EDUCATION HUB/FACILITIES

Establishing a designated physical venue within the community for education and community engagement concerning energy efficiency, renewable energy, circular economy, and behavioural change would significantly improve involvement and education within the theses areas.

Such a community facility could also serve as remote working hubs and provide space for the storage and sale of up-cycled goods such as clothing, electronics, and bicycles. Fethard-On-Sea has several buildings suitable for refurbishment to house such a scheme, serving as a demonstration project showcasing the adaptive reuse of existing structures.

For further details regarding grants, please review Appendix A. Furthermore, aside from various community organisations, private sector entities such as energy project developers with community benefit funds might express interest in supporting the SEC, provided they are informed of its existence.

PROJECT SELECTION

The SEC is advised to initiate low-effort, cost-effective efficiency projects initially to enhance their internal capacity and skills. These projects serve as quick wins for the community, motivating the group to tackle more complex endeavours in the future. Moreover, they serve as focal points for initiating discussions and sharing knowledge within the broader community.

In a residential context, this may involve distributing Home Energy Kits throughout the community, enabling individuals to identify major energy consumers in their homes and make informed decisions about reducing daily energy usage. Additionally, educating residential home owners of how to analyse their utility bills and smart meter readings will improve the communities literacy around the consumption of energy in their homes. This could be followed on by the development of a Solar Meithal as previously discussed within the report. Finally, improving community centres to facilitate remote work can significantly reduce emissions associated with commuting to workplaces.

Businesses operating within the catchment area of the SEC, should be encouraged through the hosting of business education events by the SEC, to engage with the significant training and funding available, including free audits of their businesses, which are currently available. A comprehensive list of the funding streams is detailed in Appendix A.

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APPENDIX A

COMMUNITY GRANT STREAMS

COMMUNITY GRANT PROGRAM

The Community Grant Program represents the national retrofit initiative aimed at offering capital grants for energy efficiency projects in Irish communities. Under the Communities Energy Grant, the maximum grant available per application is €5,000,000, with no single project permitted to exceed €2,000,000. Applicants are advised to contemplate grant applications of at least €100,000, considering the administrative workload associated with this program.

Successful Community projects must demonstrate some or all of the following characteristics:

- Community benefits
- Multiple elements, not a single focus
- Mix of sustainable solutions
- Innovation and project ambition
- Justified energy savings
- An ability to deliver the project

The following list outlines the types of measures that SEAI want to support through the Communities grant program.

- Building Fabric Upgrades
- Technology and System upgrades
- Integration of renewable energy sources
- Domestic Combined Fabric Upgrade
- Single Building Demonstration projects will be considered under the Communities Grant

Domestic support rates are in line with the grant offering available under One Stop Shop (OSS) relevant grants are available to review on SEAI's website using the link:

https://www.seai.ie/grants/home-energy-grants/one-stop-shop/

Fuel Poor homes will be supported at the rates applying to Approved Housing Bodies indicated in the OSS offering. The 2 measures listed below will receive additional support for Fuel Poor homes as follows:

	Detached	Semi-Detached	Terrance	APT
External Wall Insulation	€14,000	€11,000	€6,500	€4,500
Internal Wall Insulation	€9,500	€7,000	€4,500	€3,000

Non-Residential	
Type	Funding-Level
Not for profit/community	30% Up to 50% (may be available subject to state aid rules and SEAI approval in advance)
Private Sector	Up to 30%
Public Sector	> 30% ≤ 50%

SEAI'S HOME ENERGY GRANTS

For the most up to date home energy grants see: https://www.seai.ie/grants/home-energy-grants/

COMMERICAL GRANT STREAMS

STARTING YOUR ENERGY EFFICIENCY JOURNEY

Climate Toolkit 4 Business

Climate Toolkit 4 Business allows SMEs to input some simple information to get an estimate of their carbon footprint. It will use this information to generate a personalised action plan and recommend those supports that are relevant to help each business reduce their carbon footprint and energy costs.

SEAI Energy Academy

The SEAI Energy Academy is a free, online, e-learning platform designed to help businesses increase their energy efficiency and reduce their energy related costs. The SEAI Energy Academy allowsanyone to learn with short,interactive, animatedmodules. It is mobile friendlyand offers flexible, self-paced learning with access available 24/7.

Energy audits

The Support Scheme for Energy Audits - SEAI offers a Ъ2,000 voucher to SMEs to undertake a bespoke energy audit of their business. The SEAI energy audit is an important step for businesses that want to save money, save energy and enhance their brand.

Water conservation for business hub

Help protect Ireland's water supply and cut down on business costs. Learn how your business can make a difference by conserving water with the water conservation for business - Uisce Éireann.

EPA resources

The Environmental Protection Agency (EPA) has a number of resources available for business such as greening resources for business, carbon footprint calculators and EPA tool for resource efficiency.

Steps to energy efficiency

Steps to energy efficiency - SEAI sets out five steps which your business can take to begin its energy efficiency journey.

Energy efficiency guide

The SEAI Energy Efficiency Guide for Retailers (PDF, 23MB) aims to introduce simple and effective energy-related advice to help retailers use and manage energy more efficiently.

Green for Business

Green for Business is open to enterprises with up to 50 employees. Qualifying businesses will access two days of intensive mentoring including a sustainability audit and action plan, designed to help 'green' their business. This programme offers free advice and technical support on resource efficiency, how to better understand their carbon footprint and how to implement an environmental management system to reduce costs and lower greenhouse gas emissions. The support is free of charge for eligible enterprises and represents the potential for increased efficiencies.

PLANNING, PREPARATION AND TRAINING

Climate Ready Programme (Skillnet)

Climate Ready: Talent for Ireland's Green Economy - Skillnet Ireland offers leadership and skills support for enterprises who want to develop their operational and strategic sustainability.

Innovation Vouchers - Enterprise Emissions Reduction Investment Fund

Innovation Vouchers - Enterprise Ireland provide grant funding up to a maximum of €5,000 to explore a business opportunity or problem with a registered knowledge provider in the areas of sustainability and decarbonisation.

Climate Action Voucher - Climate Planning Fund for Business

The Climate Action Voucher is an €1,800 grant to engage consultants to develop an initial sustainability or circular economy action plan.

GreenPlus - Climate Planning Fund for Business

GreenPlus provides grant funding for 50% of training costs to align to international standards and frameworks and to develop a comprehensive climate change and sustainability plan.

Exploring Innovation Grant – Enterprise Emissions Reduction Investment Fund

The Exploring Innovation Grant provides grant funding up to a maximum of €35,000, based on a grant rate of 50% to enable better planning in the areas of sustainability and decarbonisation.

Strategic Consultancy Grant - Climate Planning Fund for Business

Strategic Consultancy Grant is a grant to assist large energy users develop a carbon reduction roadmap. This provides grant rates of up to 50-80% of eligible costs, with typical maximum support of €35,000.

GreenStart - Climate Planning Fund for Business

GreenStart - Enterprise Ireland offers up to €5,000 to introduce environmental best practice systems and structures and lay a foundation for future environmental improvement projects including energy and carbon management systems. If you are not a client of Enterprise Ireland and employ between one and nine employees, or between 10 and 50 employees in the manufacturing and internationally traded services sectors, you should contact your Local Enterprise Office.

IMPROVING YOUR BUSINESS WITH FUNDING

Ukraine Enterprise Crisis Scheme

The Ukraine Enterprise Crisis Scheme - Enterprise Ireland assists viable but vulnerable firms of all sizes in the manufacturing and internationally traded services sectors. There are two streams of funding under the Scheme: the first will assist firms suffering liquidity problems as a result of Russia's war on Ukraine, and the second will also help those impacted by severe rises in energy costs.

Non-Domestic Microgen Scheme

The Non-Domestic Microgen Scheme from the SEAI has now been amended to extend supports, with new funding ranges from €2,700 to €162,600, to support an even wider range of businesses to switch to solar. The updated scheme provides tiered grant supports for Solar PV installation up to 1000 kWp (1MW) capacity. This scheme helps towards the installation of solar PV for your business, farm, school, community centres, or other non-profit organisation. Solar PV technology reduces commercial electricity costs and increases security of supply, while enhancing a positive sustainability image.

The increase capacity of Solar PV available under this grant ensures a wider range of businesses can now invest in renewable energy. The scale of installation grant funding is extended for installation sizes greater than 6 kWp up to 1000 kWp. The amended scheme will be available to businesses through SEAI from mid July 2023.

The updated grant for 6kWp will remain unchanged up to €2,400 but now includes an additional:

- €300/kWp for each extra kWp installed between 7kWp -20kWp
- €200/kWp for each extra kWp installed between 21kWp- 200kWp
- €150/kWp for each extra kWp installed between 201kWp-1000kWp

Energy Efficiency Loan Scheme

The Energy Efficiency Loan Scheme - SBCI supports eligible SMEs to invest in the energy efficiency of their enterprises. Loan amounts from €10,000 to a maximum of €150,000 per borrower, over terms of 1 year up to 10 years.

EXEED Grant Scheme

The EXEED Grant Scheme - SEAI is designed for organisations who are planning an energy investment project. Grant support of up to €1,000,000 per project is available.

Support Scheme for Renewable Heat

The Support Scheme for Renewable Heat - SEAI is open to commercial, industrial, agricultural, district heating, public sector and other non-domestic heat users. The scheme offers 30% of installation costs of selected renewable technologies as well a multi-annual payment, for a period of up to 15 years.

Community Grant

The Grants for Sustainable Community Projects - SEAI support energy efficiency community projects through capital funding, partnerships, and technical support with grant supports up to €5,000,000. The scheme empowers Businesses, Public Sector Organisations, Communities, Housing Associations and Local Authorities to lead deep energy efficient upgrades on the buildings. The SEAI advises that this scheme is particularly suitable for smaller businesses, who can avail of the support and expertise of the project coordinators.

Accelerated Capital Allowance

For businesses who want to reduce their tax bill and energy costs, the Accelerated Capital Allowance - SEAI is a tax incentive encouraging investment in energy saving technology. Companies, sole traders and farmers that operate and pay corporation tax in Ireland can avail of the ACA scheme. View a list of the technologies and products on the Triple E Products Register - SEAI.

Electric Vehicle Grants (SEAI) – co-funding

The Electric Vehicle Grants - SEAI provides grant supports towards the purchase of new N1 category electric vehicles for business and public entities. N1 category vehicles are typically small goods carrying vans with a technically permissible maximum mass not exceeding 3500kg. A maximum grant of €3,800 is available for qualifying N1 category BEVs when purchased commercially.

Energy Contracting Support Scheme

The Energy Contracting Support Scheme - SEAI provides financial assistance to implement energy efficiency and decarbonisation projects. The Scheme aims to support the direct external consultancy and/or specialist advisory costs related to project appraisal and procurement of pay-for-performance energy contracts. Find out more about Energy Contracting.

Energy Efficiency Grant

The Energy Efficiency Grant, available through the Local Enterprise Offices, will provide funding to small businesses to invest in more energy efficient technology. It supports the investment in technologies and equipment identified in a Green for Micro Report, GreenStart Report or a SEAI Energy Audit with 50% of eligible costs up to a maximum grant of €5,000. The aim of the scheme is to reduce the impact of enterprises on the environment thereby increasing the agility and resilience of these businesses.

Agile Innovation Fund - Enterprise Emissions Reduction Investment Fund

The Agile Innovation Fund - Enterprise Ireland provides grant support of up to 50% for the development of new or improved products, services or processes, in the areas of sustainability and decarbonisation.

Research, Development and Innovation (RD&I) Fund - Enterprise Emissions Reduction Investment Fund

The Research, Development and Innovation Fund - Enterprise Ireland supports the development of new or substantially improved products, services or processes in the areas of sustainability and decarbonisation, which will have a competitive advantage in a company's target market and provide enhanced customer experience. It offers assistance to carry out explorative work assessing the resource requirements and the strengths, weaknesses and opportunities of potential R&D projects in the area of sustainability.

Capital investment for decarbonisation processes – Enterprise Emissions Reduction Investment Fund

Capital investment for decarbonisation processes supports investment in carbon reducing technologies in manufacturing combustion processes. This provides a maximum grant rate of 30-50%, dependent on company size, up to a maximum support of €1 million.

Energy Monitoring and Tracking Systems - Enterprise Emissions Reduction Investment Fund

Energy Monitoring and Tracking Systems (EM & T) incentivises companies to put in place monitoring and targeting systems to begin accounting for the carbon footprint of their activities.

DAIRY FARM GRANTS

As of May 2023 some of the key grants for dairy farmers are:

Grant Name	Grant Amount	Notes
Dairy Equipment Scheme (DES)	40% with a €90,000 investment ceiling	This scheme provides grant aid to farmers who are upgrading or investing in new dairy equipment.
Young Farmer Capital Investment Scheme	60% of the eligible cost, with a maximum grant of €60,000	This scheme provides grant aid to young farmers who are starting out in farming or expanding their farm enterprise.
Solar Capital Investment Scheme (SCIS)	60% grant rate, with a €90,000 investment ceiling that is separate from other schemes	This scheme provides grant aid to farmers to get Solar PV installed up to 62kW to offset their electricity costs and consumption.
Women Farmer Capital Investment Scheme (WFCIS)	60% grant rate, with a €90,000 investment ceiling	This scheme provides grant aid to female farmers who are expanding their farm enterprise.