

LAUNCH OF EMP May
2025

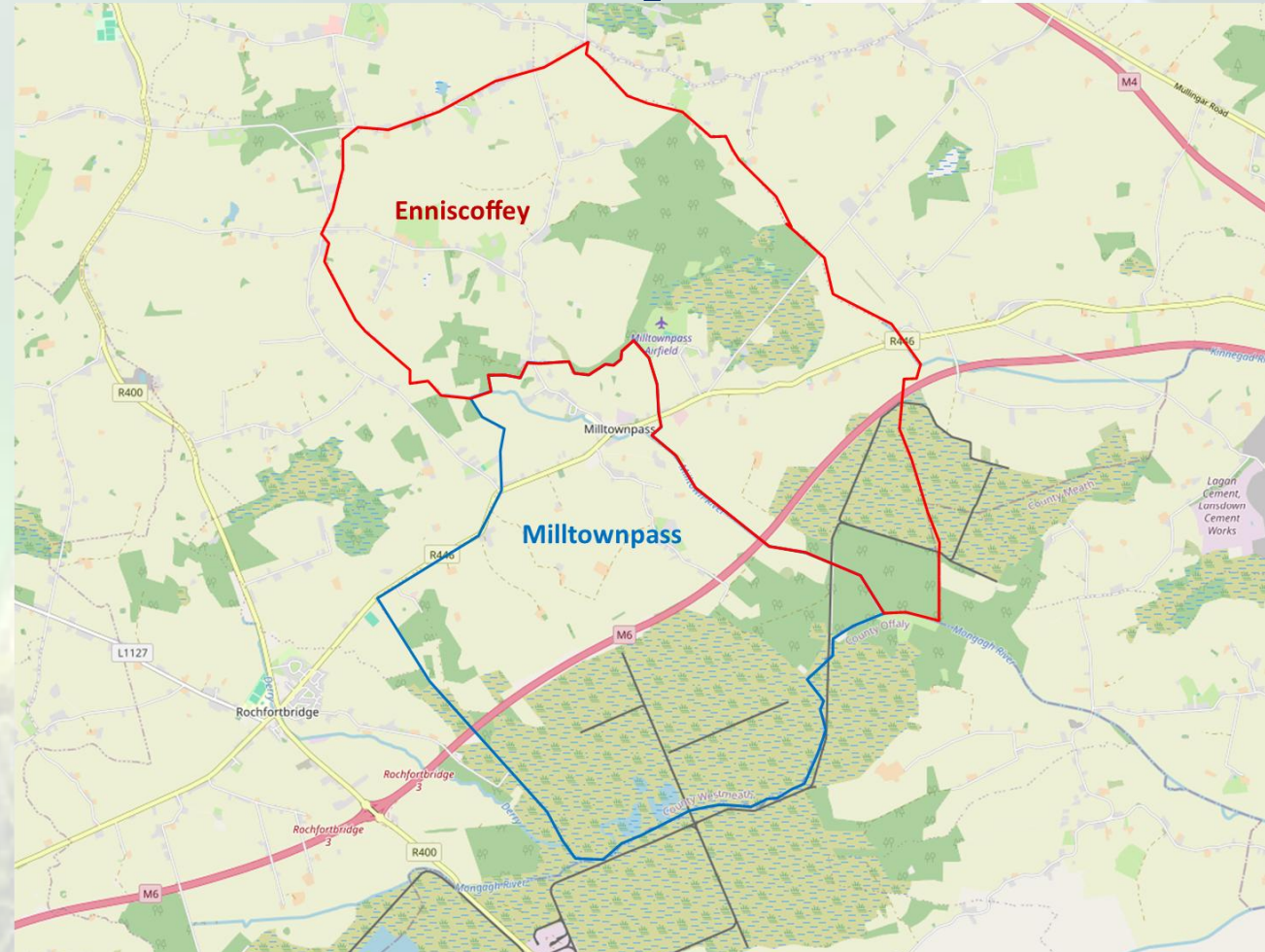
Energy Master Plan for Milltownpass Sustainable Energy Community (SEC)





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Milltownpass SEC





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Milltownpass SEC

1. Local Water Quality Improvement.

National Tidy Towns Water and Communities Awards.

2. Bus Shelters.

3. CO2 Reduction through Climate Champions Challenge.

2023 team of 8 volunteers competed in Ireland's first ever community climate challenge. They saved 937.8kg CO2: first in Westmeath and 16th nationally out of 73 teams.

4. Solar Upgrades Submission to Council



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**Committee members & Siobhán
Kinahan: SEC mentor**



900+ SECs all
around Ireland

Milltownpass
SEC

Request for
Quotations to
conduct EMP

Energy Co-
ops Ireland



Overall Aims

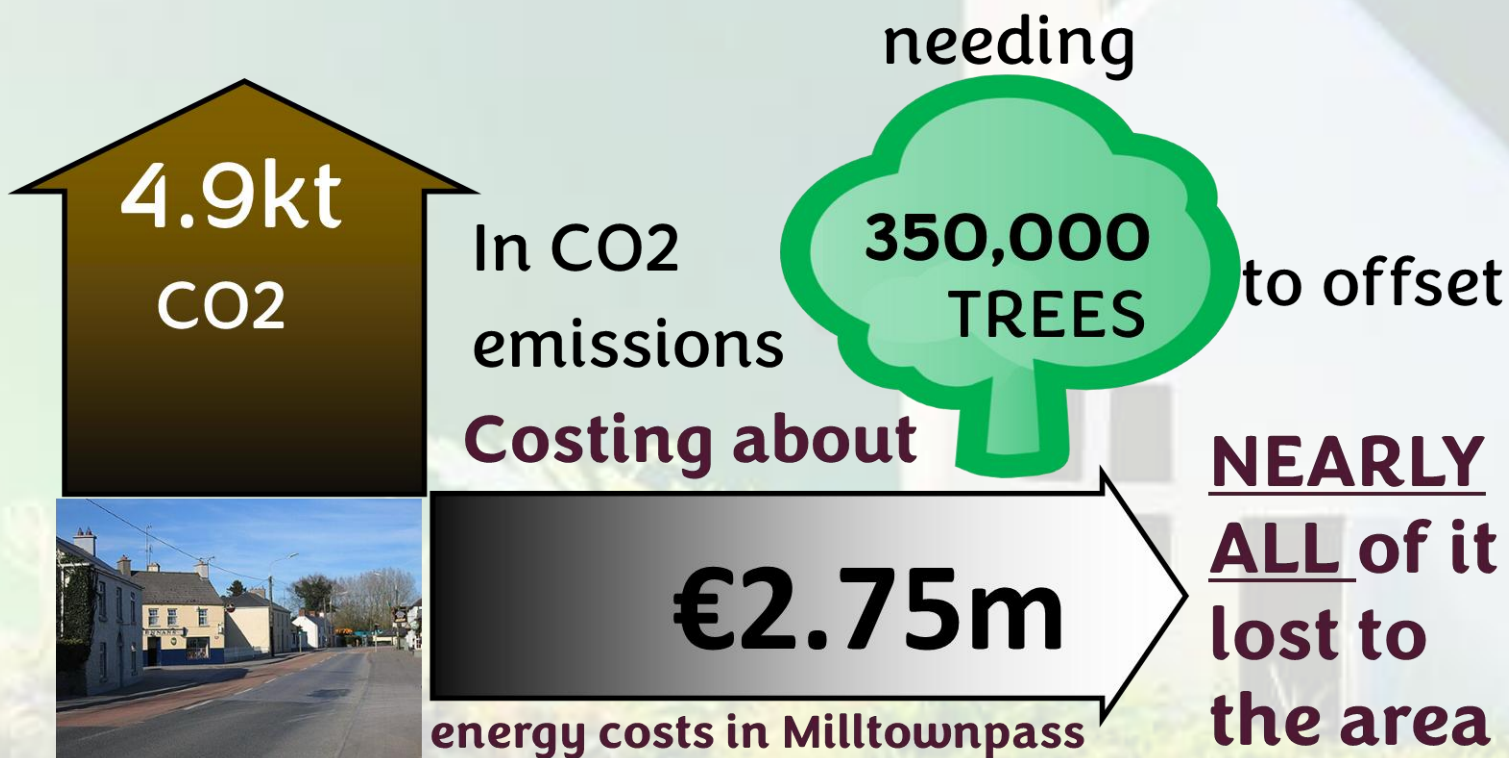
To produce a strategic plan that will help bring Milltownpass SEC from a position of energy inefficiency and over-reliance on imported fossil fuels to a community that is more energy efficient, with lower carbon emissions (30% reduction) and having affordable and reliable local sources of energy.

Show the opportunities for energy conservation within the community.

Develop examples of both business and private case studies with a view to get homes, businesses and farms to switch to green energy.

Start process for a Community Energy Retrofits project and a PV scheme

Summary: 2025-2031

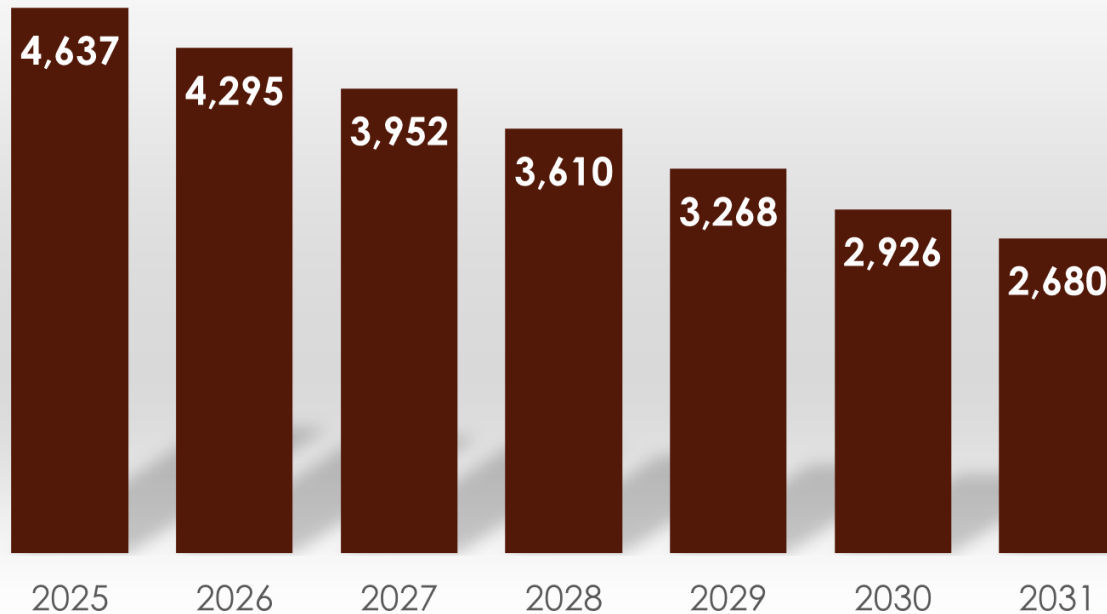


Summary: 2025-2031



Summary: Possible position 2031

Total Emissions Reduction tCO₂



Under this Sustainable Energy Strategy, emissions from Milltownpass SEC's energy use would be reduced to just 70% of 2024 levels, but with considerable amounts of that produced renewably and locally

Survey of Energy Use

Data from a wide range of sources: for example, BER database, CSO

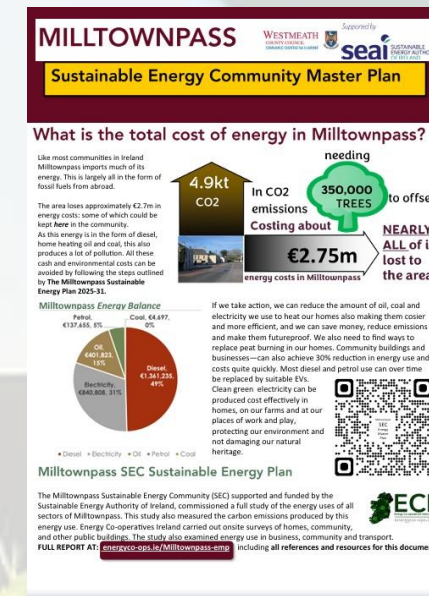
Information on the EMP is available at:

energyco-ops.ie/milltownpass-emp

There an 8-page summary guide in a PDF

Sign-up forms for locally based money and energy saving projects

Will be kept up to date with news and information



Basics

Population of 751 people, in 252 homes

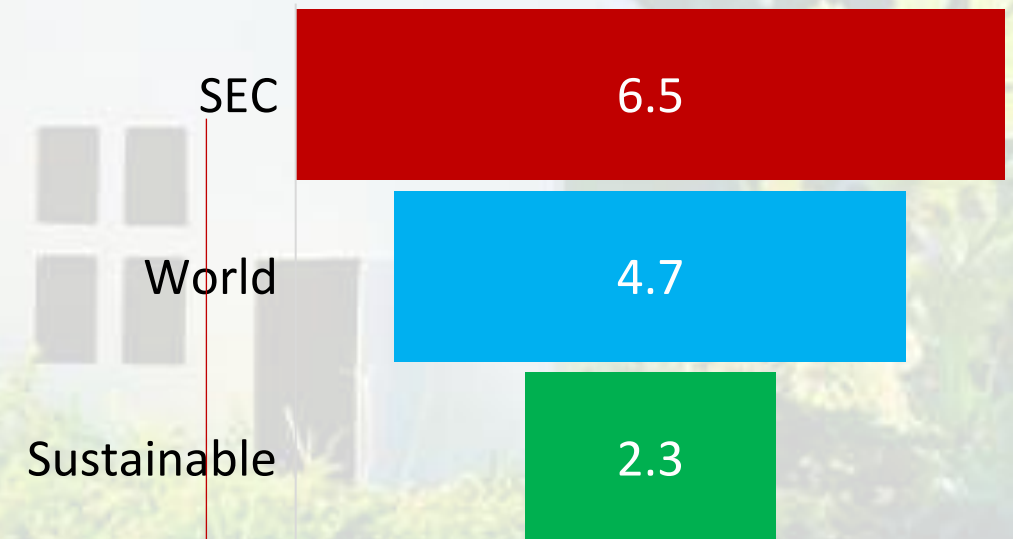
8 Registered businesses and community buildings and 60 Farms

Annual tCO₂ per person in SEC: is 6.5 tonnes CO₂ pp/yr (tCO₂)

The World Average is 4.7 tCO₂ pp/yr

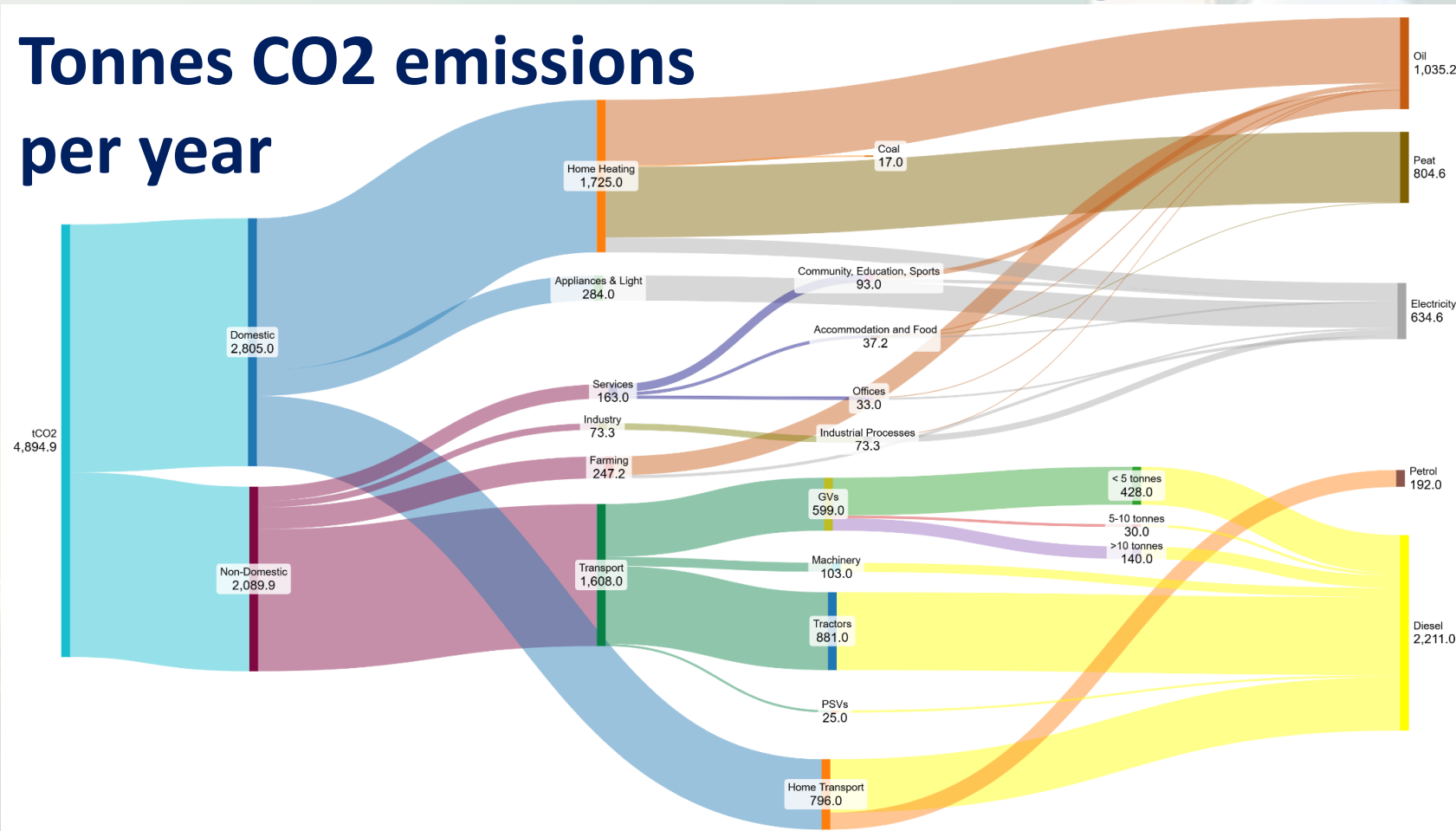
To keep us below 1.5C global warming, this has to be 2.3 tCO₂ pp/yr

Doesn't include Flights (9%), or Food or Purchased Goods and Services (43)%



Findings

Tonnes CO2 emissions per year



Oil
21%



Electricity
13%



Diesel
45%



Quick Tips

Step 1: Do Your Own Audit:

- Check windows, external doors, vents, floor spaces, fireplaces, and stoves with a stick of incense: and track down and eliminate draughts.
- Check insulation levels in attic, basement, walls (including the meter box), and floors
- Check your boiler and stove; what age are they? When were they last serviced?
- Collect energy bills and scrutinise them over a year or 2.
- To save money in the short term see if you need to change your electricity supplier.

Quick Tips

Step 2: Actions to save 22% of your energy costs and fossil fuel use:

- Turn everything off – don't leave on standby (2%)
- Use a clothesline when possible – tumble dryers are energy heavy. (7%)
- Wash clothes @ 30 degrees (1%)
- Turn off lights when not in a room, replace bulbs not all at once but as they go with highest rated LEDs (**A+ check label**) (2%).
- Use central heating to heat water-tank. (10%)
- If you use the immersion, install a timer so it's on at cheaper electricity rate times.
- Use a shower pump NOT a power shower

Quick Tips

Step 3: Control how you use heat

Keep room temperature 19C (this can save up to €350 every year for each degree lower you heat the house)

Close the curtains at dusk to keep heat in the room that would otherwise be lost through the cold windows, and you could save up to 10% of your heating costs.

Consider fitting shelves above radiators as they redirect the warm air that rises from them back into the room.

Air your house 3 to 5 minutes a couple of times a day, instead of opening windows a little bit all day. Shut off your heating, during airing. This can reduce heat loss by 16%.

Bleed your radiators regularly. If there is air in your radiator your boiler burns longer. Start with the lowest and end with the highest radiator.

Retrofits

Make your home cozier, save money and reduce carbon emissions



External doors, Roof and Wall
insulation, Windows upgrade
Air-to-Water heat pump and
integrated heating controls

6 measures which, when completed in order, will bring the home's energy costs for the home from €6,357 per to €3,278 per year.

Potential 49% reduction saving of €3,079. CO₂ emissions of the home would be reduced by 12 tonnes the equivalent of carbon sequestered by 858 mature trees annually.

Retrofits

Make your home cozier, save money and reduce carbon emissions



External doors, Roof and Wall insulation, Windows upgrade
Air-to-Water heat pump and integrated heating controls

Sample Home Measures	Est Cost Nett Grants*
Exterior Door	€2,200
Roof Insulation	€500
Wall Insulation	€7,500
Windows Upgrade	€6,000
Airtightness	€500
HP	€9,100
Total	€25,800
Savings	€2,793.32
Payback Yrs	9.2

*Costs are based on 2025 industry levels, grant amounts on 2025 one-stop-shop levels which can be found at [this link](#). Actual costs and grants may vary according to building specifics



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Retrofit Supports

Individual Energy Upgrade Grants

Up to 80% of the cost of the upgrade for a typical family home with SEAI grants

Homeowners manage their own upgrades including:

- contractor selection
- grant application
- contractor works
- pay for full cost of works and claim grants afterwards
- follow up BER

For homes built and occupied before:

2011 for insulation and heating controls

2021 for heat pumps and renewable system



Retrofit Supports

Energy Upgrade Grants

External Wall Insulation

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€23,150	€8,000
Semi-D / End Terrace	€21,560	€6,000
Mid Terrace	€13,750	€3,500
Apartment	€4,100	€3,000

Internal Wall Insulation

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€8,890	€4,500
Semi-D / End Terrace	€8,840	€3,500
Mid Terrace	€6,500	€2,000
Apartment	€4,000	€1,500

Heat Pump

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€15,000	€6,500
Semi-D / End Terrace	€14,630	€6,500
Mid Terrace	€13,000	€6,500
Apartment	€11,850	€4,500

Solar Heating

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€6,160	€1,200
Semi-D / End Terrace	€5,530	€1,200
Mid Terrace	€4,990	€1,200
Apartment	€1,750	€1,200

Heating Controls

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€3,500	€700
Semi-D / End Terrace	€3,800	€700
Mid Terrace	€3,730	€700
Apartment	€4,310	€700

Building Energy Rating

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€250	€50
Semi-D / End Terrace	€250	€50
Mid Terrace	€250	€50
Apartment	€250	€50

Cavity Insulation

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€2,250	€1,700
Semi-D / End Terrace	€1,600	€1,200
Mid Terrace	€1,150	€800
Apartment	€800	€700

Roof Insulation

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€2,400	€1,500
Semi-D / End Terrace	€1,860	€1,300
Mid Terrace	€1,780	€1,200
Apartment	€1,570	€800

Solar PV UP TO 2KWP

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€7,890	€800
Semi-D / End Terrace	€7,820	€800
Mid Terrace	€7,890	€800
Apartment	€5,050	€800

Solar PV UP TO 4KWP

HOUSE TYPE	MEDIAN COST	FIXED GRANT
Detached	€10,150	€250
Semi-D / End Terrace	€9,400	€250
Mid Terrace	€8,910	€250
Apartment	€8,970	€250*

* per additional kWp

Data based upon 40,118 homes completed through Individual Energy Upgrades (December 2023).

Median is the mid-point of all the upgrade costs, where half of upgrades are less expensive, and half of upgrades are more expensive.

For more information, please visit www.seai.ie/home-energy/home-upgrades/

Retrofit Supports

One Stop Shop Service

Based on set grants per measure, this can be grant funded by SEAI 45 - 50% of the cost for a typical family home

A One Stop Shop contractor manages upgrade including:

- home energy assessment
- grant application & project management
- upgrade to a minimum B2 BER
- contractor works
- homeowner pays for the works net of grant
- follow up BER

For homes built and occupied before:

2011 for insulation and heating controls
2011 for renewable systems



Retrofit Supports

Fully Funded Upgrade

Qualifying* homeowners receiving certain welfare benefits: All home upgrade costs covered by SEAI

Service is managed by SEAI and includes:

- home survey
- contractor selection
- contractor works
- follow up BER

Homes built and occupied before 2006

*Person receiving one of:

Fuel Allowance **or** Job Seekers Allowance **or**
Working Family Payment **or** One-Parent Family Payment **or**
Domiciliary Care Allowance **or** Carers Allowance **or**
Disability Allowance





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Retrofit Opportunity

Community Energy Grant

- 10 homes, one community building & SME in a joint energy retrofit project.
- The grant application, the appointment and supervision of a contractor and the sourcing of co-financing and grants will all be done through the SEC
- Assisted by independent and experienced local project co-ordinator.
- Makes process of retrofitting homes easier and better value for all.
- Spreads the benefits throughout the community.
- Sign up and declare your interest in joining the application at energyco-ops.ie/Milltownpass-emp



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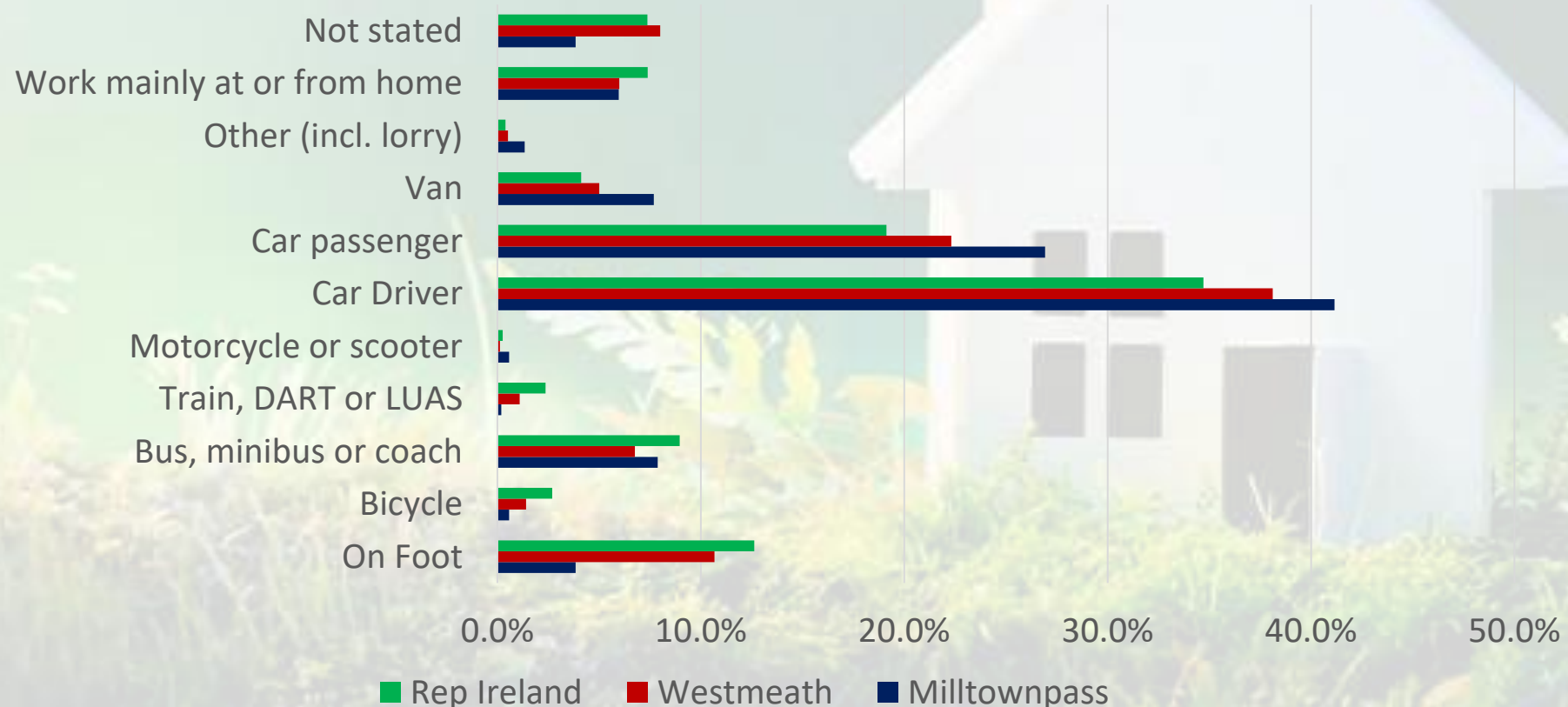


Go to the link to
find out more

Transport

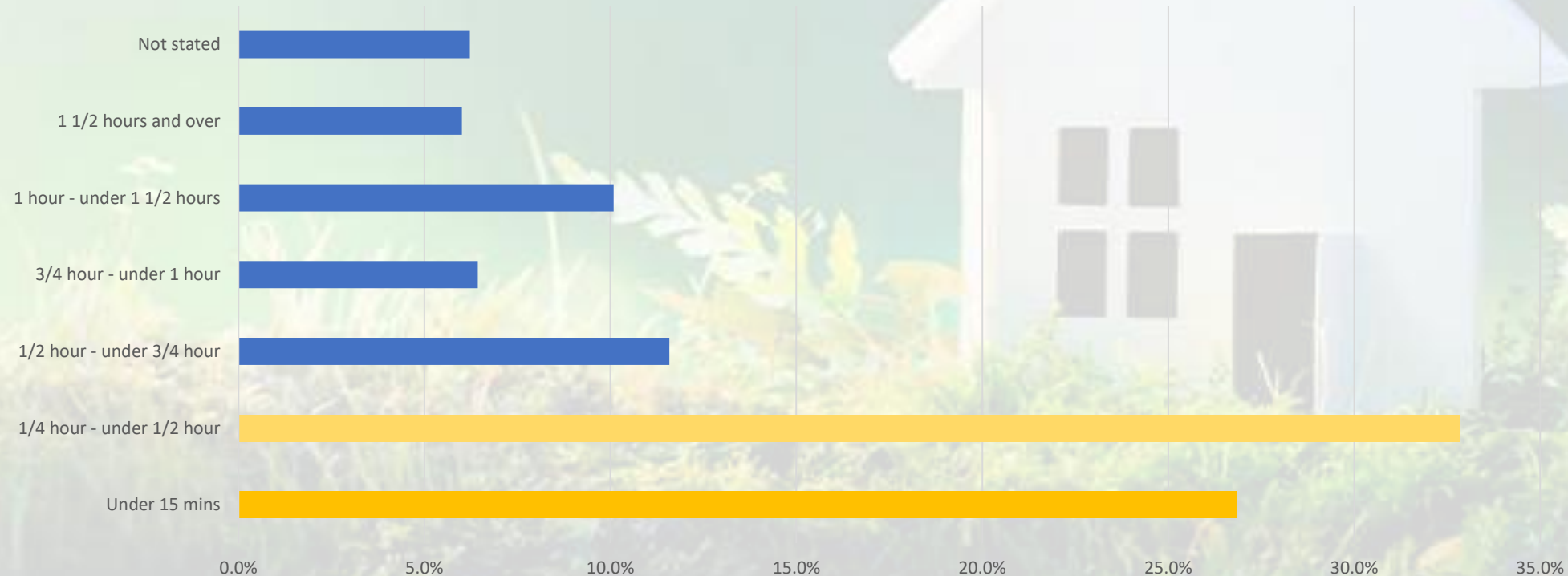
There are about 451 private cars in the SEC .

An estimated 68% are diesel with 26% petrol and 5.7% other (probably EVs).



Transport

Vast majority of journeys are within the range of EV batteries, park and ride in Mullingar can meet the demands of nearly all the remainder of trips.



Transport

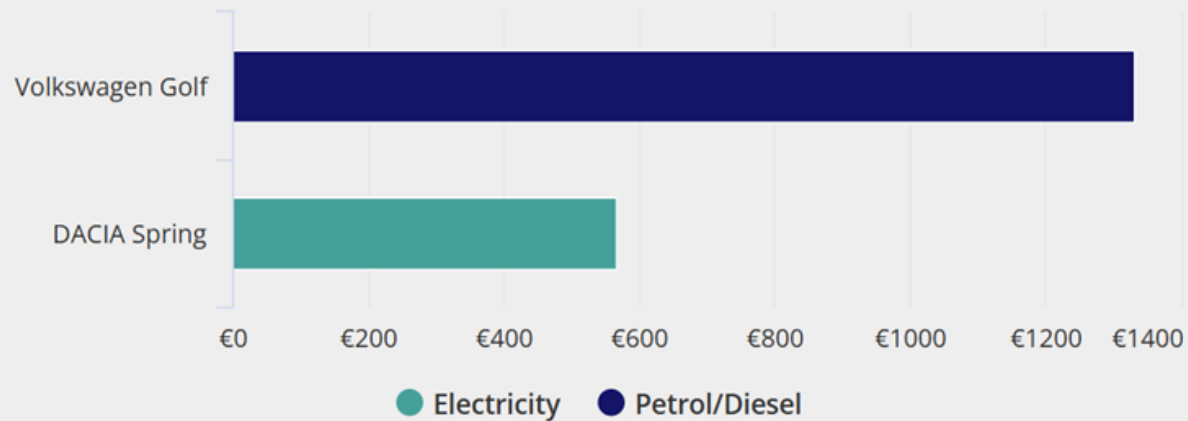


Volkswagen Golf
2.0 TDI 115HP Life

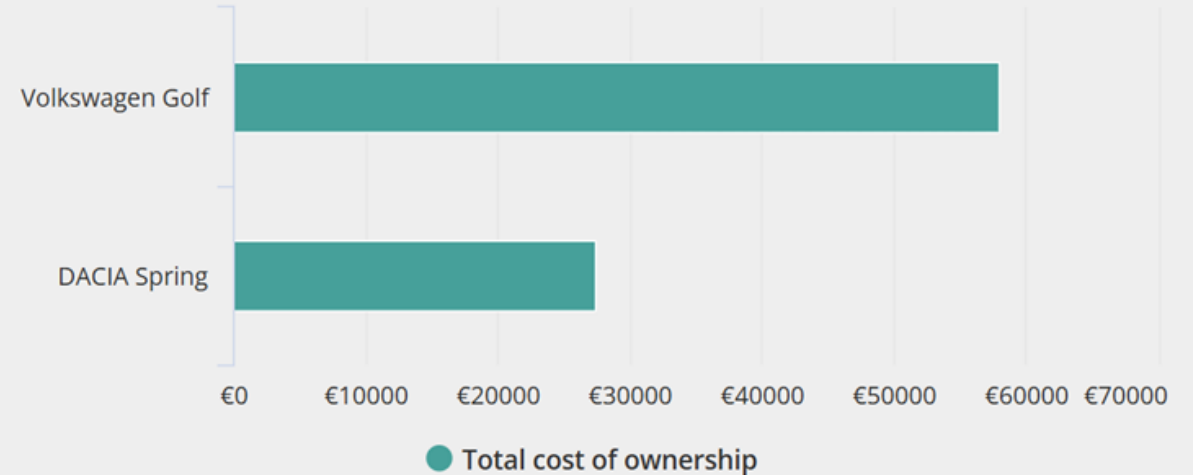


DACIA Spring
BEV 26.8kWh 45HP Expression

Annual energy costs



10 year total cost of ownership



Businesses and Community

Most SMEs and Community Buildings can save approximately 30% of energy costs and emissions relatively easily

Grants available for audits and recommended actions. A €2,000 energy audit voucher. Community grants available for schools, clubs, etc

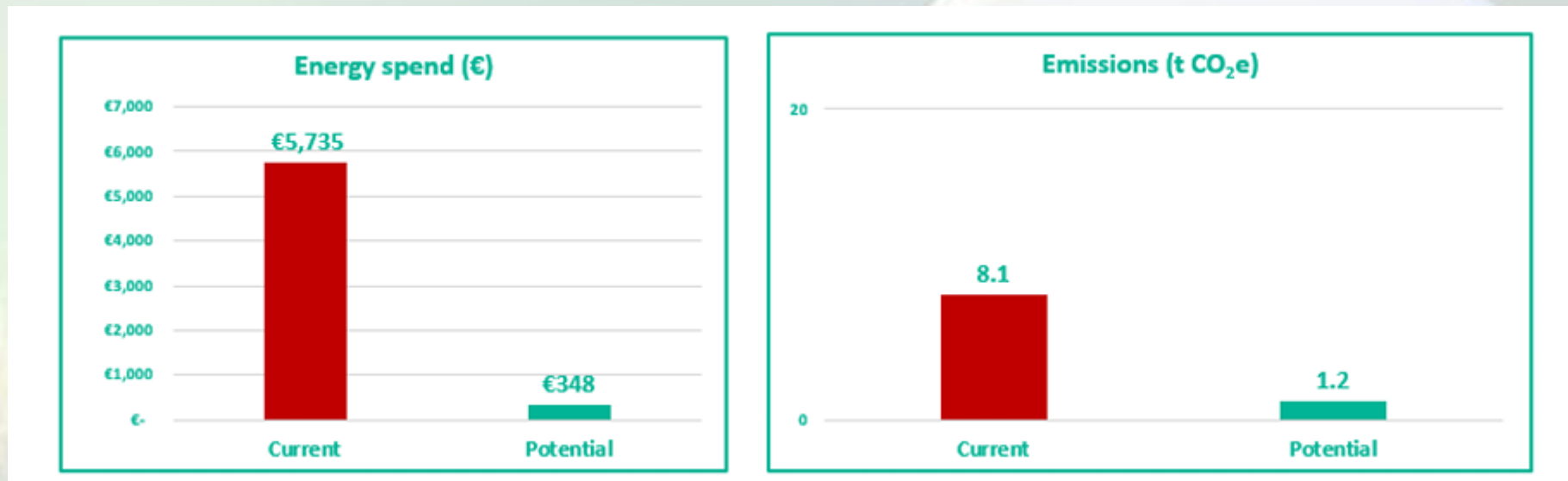


Energy performance

	Current	Potential
Energy management	★★★	★★★★★
Building fabric	★★★★	★★★★★
Building services	★★★★	★★★★★
Manufacturing & processing equipment	N/A	N/A
Manufacturing & processing controls	N/A	N/A
Use of renewables	★★★	★★★★★

Businesses and Community

Compare current and potential energy costs, before and after recommended actions



94% reduction in energy bills, 5.5 years payback on works



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Businesses and Community

Community Energy Grant

- 10 homes, **one community building** & **SME** in a joint energy retrofit project.
- Sign up and declare your interest in joining the application at energyco-ops.ie/Milltownpass-emp
- There are SMEs and community buildings in the area that could be brought into 2nd and 3rd years: talk to them.

Farms

60 farms in the SEC area

	Farms	Av Area (ha)	Tot Area (ha)	Grassland (ha)	Cattle (ha)	Sheep (ha)
Milltown	16	46	735	694	694	
Enniscoffey	44	27	1,184	1,012	949	62.6
TOTAL	60		1,919	1,706		

Farms can be in
Community
Energy Grant
Applications

Total Energy Use (excluding tractors and machinery) approx.
971 MWh per year

PV and Cattle?

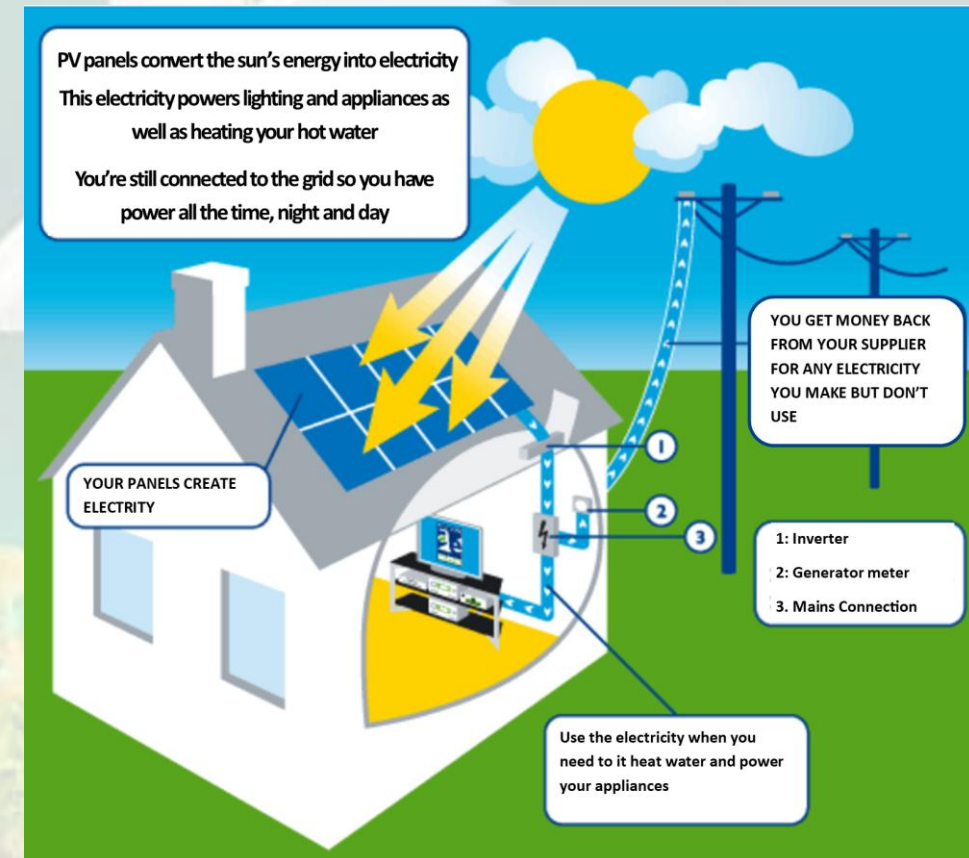
- Lower costs and carbon footprint with medium scale onsite PV: now includes dairy as well as sheep farmers.
- Grid payments for excess generation, but you will need to consume at least 20% of the power you generate.
- Dave Foran's dairy farm in Co Waterford uses a bifacial 27kW PV system.
- 74% of the energy generated consumed on the farm: payback in just four years
- Avoiding nearly 9,000 tCO₂, equivalent to planting 636 trees



PV in the home

A number of solar panels mounted to your roof (or in your garden or adjacent field)
Connected into the electrical loads within your building.

PV systems are rated in kilowatts (kWp).
A 3kWp solar PV system would require about 12 solar panels on your roof needing about 8m² of space
In this area it will generate about 2,900 units of electricity (kWh) a year.



PV for the community?

- Severe grid restrictions
- RESS scale PV difficult locally at present

Distributed PV potential in homes

- 252 homes, 244 are houses with 5 rooms or more
- These would be very suitable for 3kW+ home PV systems
- This would generate about 768 MWh of electricity annually.
- Equivalent to a grid scale PV farm
- And is more 'profitable'

Economics of a 3kW System in Milltownpass

System Cost (with grant)	Annual Savings & Rebate	Payback Period	Lifetime** Profit
€4,800	€777/year*	6.1Years	€11,604

*Based on a cost of €0.31/kWh unit electricity and a price for supply to grid of €0.25 per unit electricity with half used in the home and half exported.

**A typical PV System has a 25-year lifespan. This does not include any increase in cost of electricity over the period which would increase the lifetime profitability.

Solar Meitheal

A community-led concept.

Bringing homeowners together in a local area who want to install Photovoltaic (PV) panels on their homes.

- Source quotes from Solar PV suppliers and installers, through bulk purchases
- Simplify planning multiple installations in one community
- Help each other learn and succeed in carrying out a potentially challenging project
- Perfect first project for Milltownpass SEC



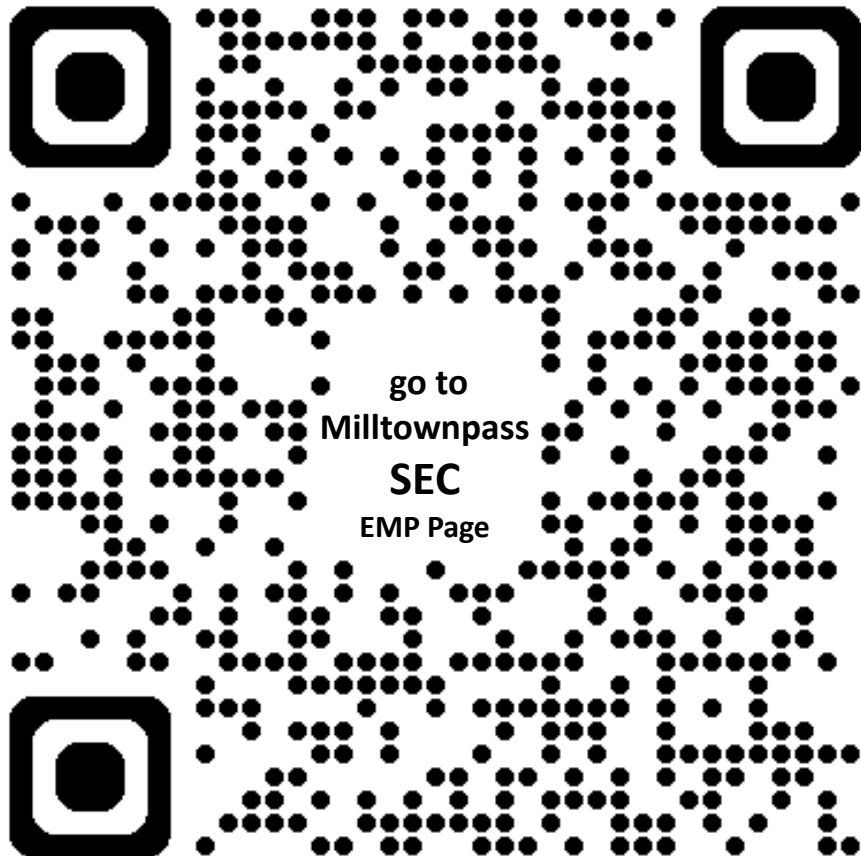
Greystones and Delgany SEC Solar Meitheal, Co. Wicklow,
greystonesgreenenergy.ie

Solar Meitheal

A community-led concept

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Go to the link to
sign up for
Milltownpass Solar
Meitheal

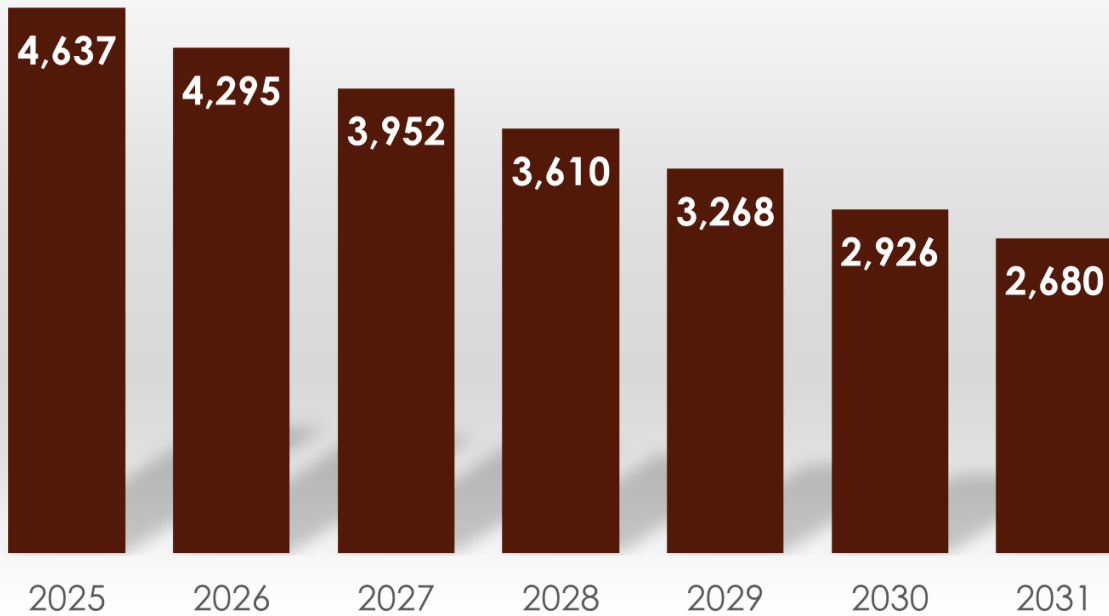
Greystones and Dergany SEC solar
Meitheal, Co. Wicklow,
greystonesgreenenergy.ie

Total Sustainability Actions

- Retrofit 15% of G-C3 homes each year to B3
- 15% ND Buildings upgraded each year achieving 30% energy reduction
- Information campaign to encourage GV owners to switch to E Vans
- Information campaign to encourage PSV owners to switch to EVs
- 5% replacement of FF domestic cars with EVs annually
- Campaign for Tractors, Machinery and HGVs in SEC to switch to HVO
- 50 homes with 3kWp installations with 116 additional homes recruited each year until a target of 745
- Farms, Businesses and Community organisations to install micro-auto consumption PV according to onsite demand

Total Sustainability Effects

Reduction in tonnes CO₂



Estimated Annual
Costs Savings by
2031: €1.4m/yr



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Tonight's Actions



Go to the link to sign up for
Milltownpass SEC Solar Meitheal
and The Community Grant

**Help one friend, neighbour, or family member
register for the Fully Funded Retrofit Scheme**