

EirGrid

Energy Citizens Roadshow

Welcome.

Please take time to network, explore the information stands and help yourself to refreshments.

The panel discussion will commence at 7pm.

EIRGRID



EirGrid Energy Citizens Roadshow

Open and Welcome

Jamie Moore

EirGrid



EirGrid

Energy Citizens Roadshow

- **7.00pm** Open and Welcome
  Jamie Moore, EirGrid
- **7.05pm** Overview of Event and Introduction of the Panel
  Jonathan Healy*, Master of Ceremonies*
- **7.10pm** What Shaping Our Electricity Future means for Cork,
  Shane Cooney, *EirGrid*
- **7.20pm** National Network Local Connections Programme,
  Gerry Noone, ESB Networks
- **7.30pm** SEAI Supports for Communities and Households*,*
  Kieran Lettice, SEAI
- **7.45pm** Decarbonising Cork Cities Housing Stock
  Brian Cassidy, Cork City Council
- **8.00pm** Questions and Answers
- **8.30pm** Wrap

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Energy Citizens Roadshow

Overview of this evening

Jonathan Healy

Master of Ceremonies

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Energy Citizens Roadshow

What Shaping Our Electricity Future means for Cork

Shane Cooney,

EirGrid

EIRGRID



Cork Energy Citizens Roadshow

Ballyphehane – 10th November

EIRGRID



Who are EirGrid and what do we do?

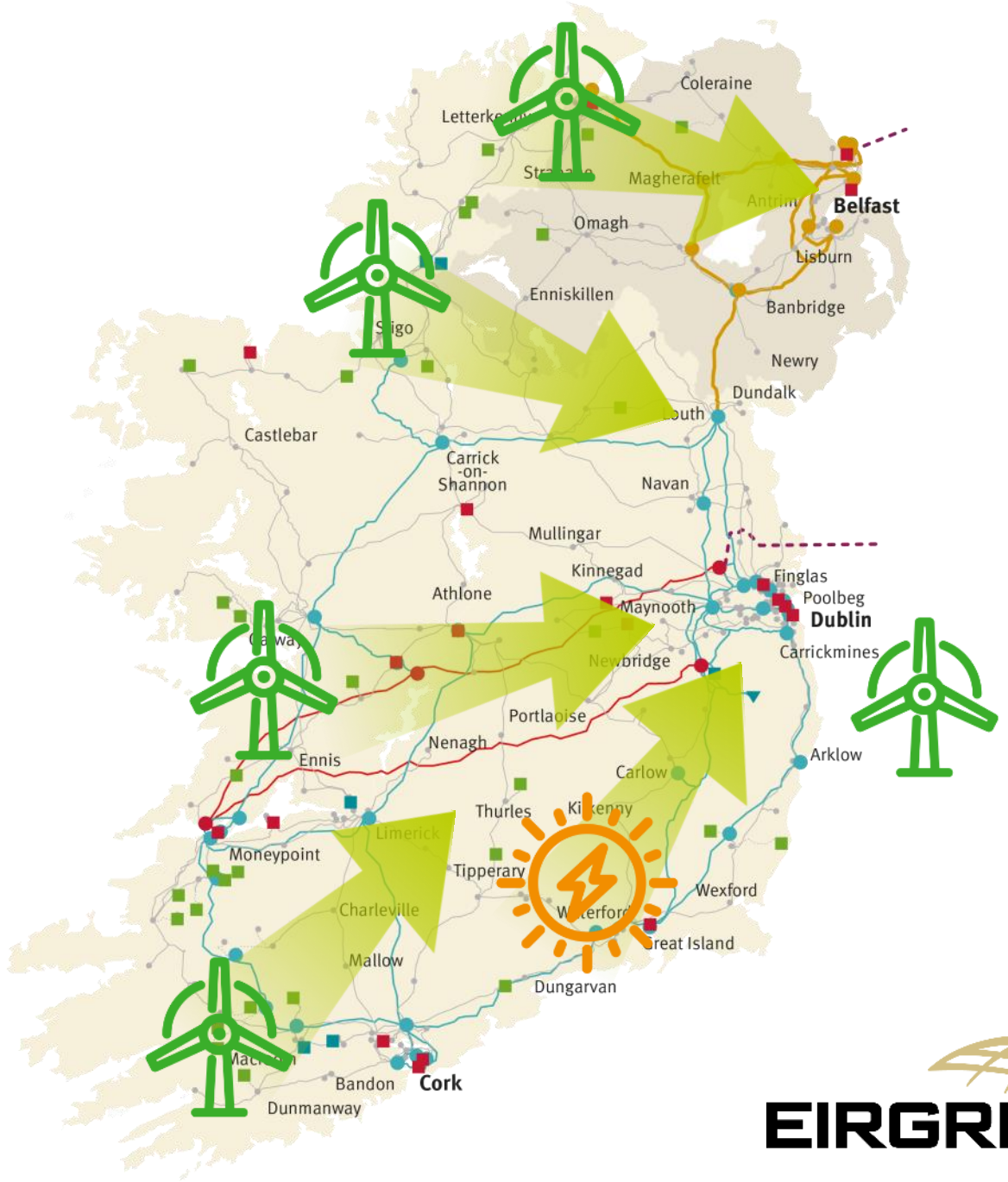
- State owned operators of Ireland’s electricity transmission grid.
- We send power from where it is generated to where it is needed.
- We operate the wholesale electricity market.
- We operate electricity interconnectors with neighbouring countries.
- We do not generate electricity.

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The Government has asked us to prepare the grid so up to 80% of Ireland's electricity can come from renewable sources by 2030.
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Preparing Ireland's electricity grid

- More electricity will be carried across this grid than ever before, and most of this power will come from renewable sources.
- The grid needs to carry at least 10 GW more renewable electricity by 2030 – double 2020 levels.
- Power output from renewable sources depends on the weather.
- Renewable electricity is typically generated far away from where most electricity is used.



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How will we achieve this?

Ireland Approach

Generation-led approach with aspects of Demand-led and Technology-led

Northern Ireland Approach

A balance of all approaches, leaning towards Developer-led.

40 projects in Ireland

4 new circuits
24 upgrades to existing circuits
1 new transformer
11 new technology projects

12 projects in Northern Ireland

3 new circuits
7 upgrades to existing circuits
2 new technology projects

10-year plans for

Engagement | Markets
Operations | Networks

A plan to deliver at least 70% renewable energy by 2030, an important step on the journey to 80%, on the island of Ireland.

Expected Generation

- 5.1 GW of Offshore Wind
- 2.4 GW of Onshore Wind
- 600 MW of Micro-generation Solar
- 1.3 GW of Large Scale Solar
- 1.65GWof Battery Storage
- 2.6 GW of Derated Gas

How did we consult...?

14-week consultation

Over 500 consultation responses

3 Day Deliberative Dialogue

Over 100 consultation events

National Youth Assembly

Civil Society Forum

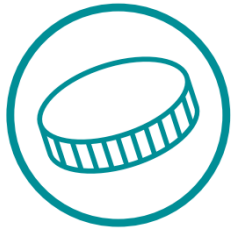
...and what did the public say?



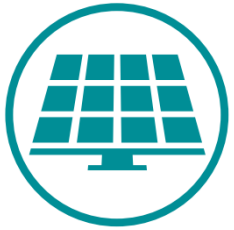
Benefits for regional and rural communities



Community ownership



Keeping costs manageable

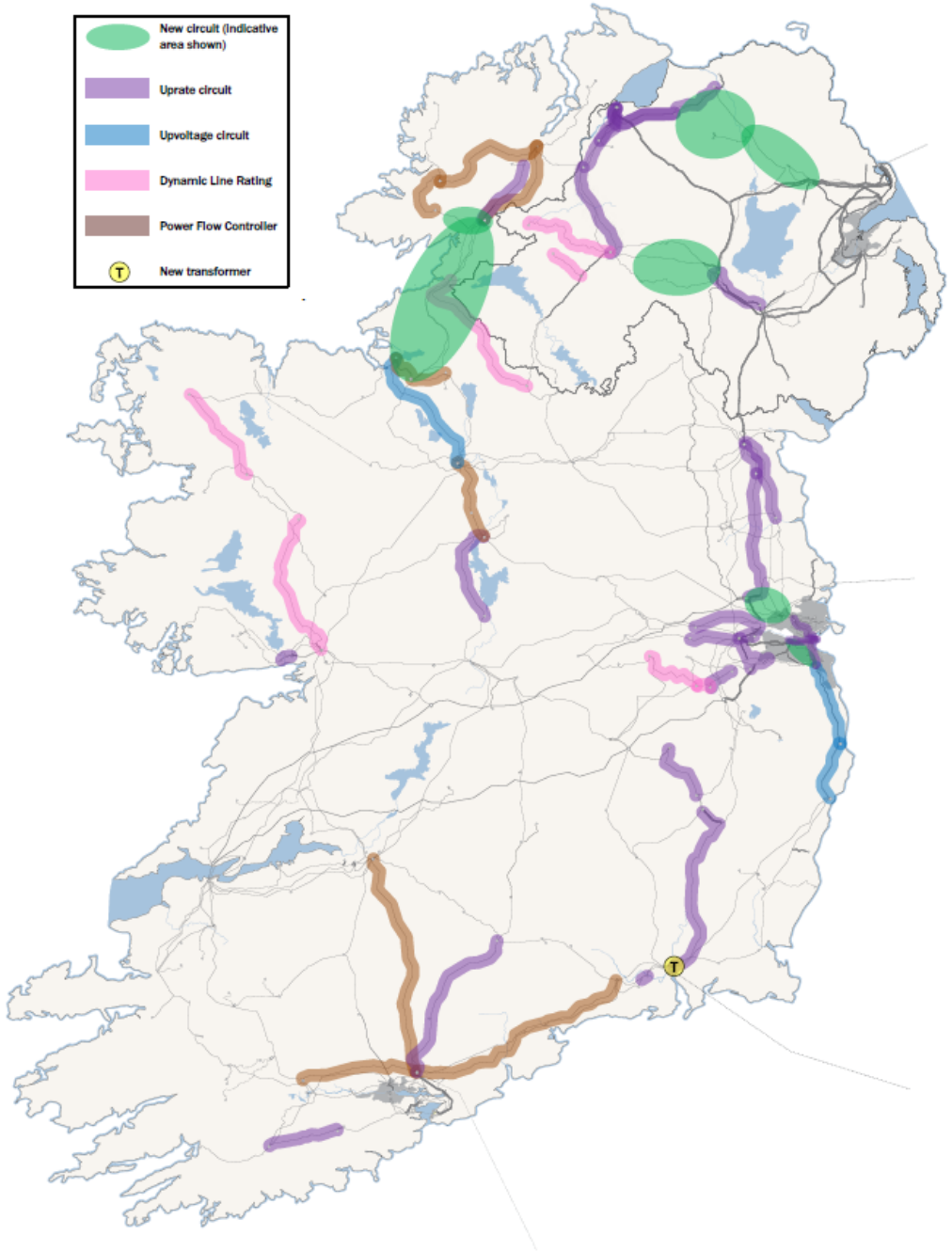


Microgeneration



Social acceptance

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What infrastructure will be required?

- **294 existing projects**

- **40 new projects in Ireland**
  - 3 new circuits
  - 7 upgrades
  - 2 new technology projects
  - 1 new transformer

- **12 new projects in Northern Ireland**
  - 3 new circuits
  - 7 upgrades
  - 2 new technology projects

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2 project promoters

EirGrid and Réseau de Transport d'Électricité

575 km

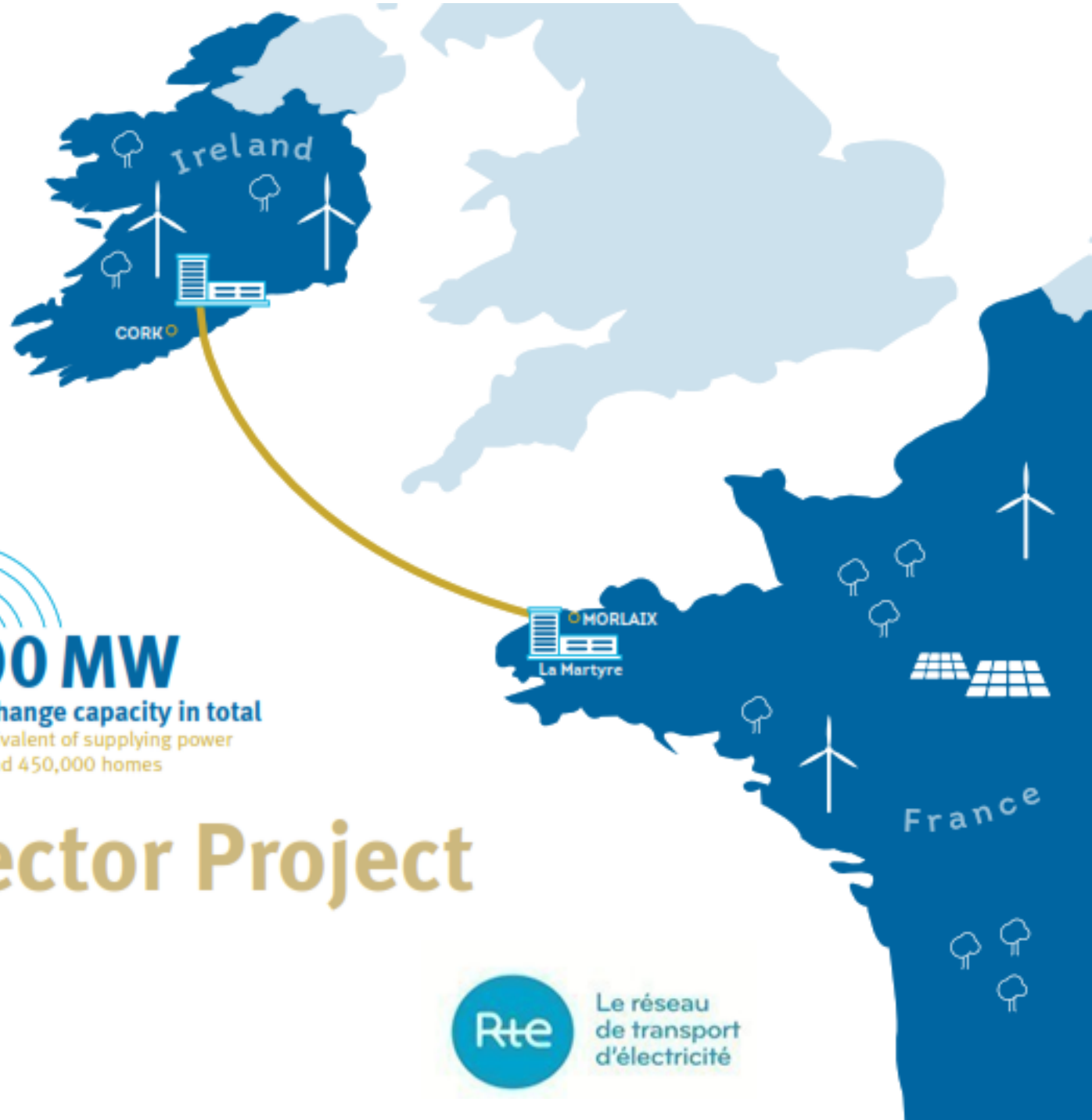
total length

500 km subsea

700 MW

of exchange capacity in total

the equivalent of supplying power to around 450,000 homes



The Celtic Interconnector Project

Connecting the Electricity Grids of Ireland and France

RTE Le réseau de transport d'électricité

The Celtic Interconnector

- Jointly designed and built by EirGrid and RTE
- Substantial €530.7m Connecting Europe Facility Grant
- Connects Ireland's Electricity Market to the French Electricity Market
- Enhances Security of Supply
- Essential to Ireland's Climate Action Ambitions

European Commission



Construction 2022 - 2026















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Next Steps – Celtic Interconnector

Current Phase



EPC Contracts



Balance of Funding



Approvals

Next Phase



Build



Cable Installation



Operational Readiness



Commission

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Summary

- Shaping Our Electricity Future Roadmap was published in November 2021 at COP26. An update will publish in Q1 2023.
- It provides a deliverable plan through to 2030 and ultimately towards a net zero carbon energy system by 2050.
- To achieve this plan, significant transmission network upgrades are required (new and existing).
- This will be supported by an extensive program of community and stakeholder engagement.

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Thank You



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Energy Citizens Roadshow

National Network Local Connections Programme

Gerry Noone

ESB Networks

ESB NETWORKS

NATIONAL NETWORK LOCAL CONNECTIONS PROGRAMME

Cork City



ESB Networks



We serve 2.4m Irish homes, farms businesses, as the company licensed to build, operate, maintain and develop the Irish electricity network.

Our countrywide staff of 3,000 people are proud to put every customer first, whatever the electricity supplier.





We build and operate the high, medium and low voltage electricity infrastructure, including distribution stations, overhead lines, poles and underground cables.

We are funded through 'use of system' charges billed to customers via all electricity suppliers. Our prices are set by the Commission for Regulation of Utilities.



ESB NETWORKS

SET THE SCENE

Why ESB Networks National Network, Local Connections Programme?



WHAT IS NATIONAL NETWORK, LOCAL CONNECTIONS PROGRAMME - WHAT IS IT ALL ABOUT ?



Supporting communities (homes, farms, businesses)

to get more form their local connections

+



Rapidly adapting the Network

A network for net zero.

=

2030 Climate Action Targets

Supporting this Community



What the studies are telling us!

Why?

THE NETWORK OF THE FUTURE (2030)

Today



High dependency on fossil fuels & imports

40% renewable electricity



Microgeneration
Minigeneration
Community wind & solar
Electric transport
Heating & home retrofits
Social & economic growth

2030



More resilient, independent & sustainable.

80% renewable electricity

ESB NETWORKS

NATIONAL NETWORK, LOCAL CONNECTIONS PROGRAMME

Micro-generation







ESB NETWORKS

NATIONAL NETWORK, LOCAL CONNECTIONS PROGRAMME

Mini-generation





The Home & Business of the Future

"To meet the required level of emissions reduction, by 2030 we will…ensure that ***20-30% of system demand is flexible by 2030"***

- Rialtas na hÉireann, Government of Ireland November 2021



ESB NETWORKS

NATIONAL NETWORK, LOCAL CONNECTIONS PROGRAMME

Beat the Peak!



Beating the Peak in My Home

Coming in 2023



Beating the Peak in our Community

Coming in 2023



www.esbnetworks.ie/pilot

ESB NETWORKS

NATIONAL NETWORK, LOCAL CONNECTIONS PROGRAMME



ESB NETWORKS

NATIONAL NETWORK, LOCAL CONNECTIONS PROGRAMME



EirGrid

Energy Citizens Roadshow

Sustainable Energy Communities

Kieran Lettice

SEAI

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Rialtas na hÉireann
Government of Ireland

www.seai.ie

We work with Government, homeowners, business and communities to create a cleaner energy future



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2021 Achievements

Citizens and communities

€196 million

Government funds invested in Ireland's clean energy transition

grant support towards

11,300

home energy upgrades including

2,272

energy poor homes

600

in the sustainable energy communities network

39

community energy projects funded with €26.5 million

185

School workshops where over 4,600 students participated

95,000

BERs published through SEAI systems

13,418

electric vehicles and

8,428

home charging units supported



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Creating a Cleaner Energy Future

Climate Action Plan set out to significantly reduce Ireland's greenhouse gas emissions by 2030

- 500,000 existing homes upgrade to a B2 BER rating
- 600,000 heat pump installations, with 400,000 to be installed in existing homes
- 50% of houses in Ireland have a BER rating of D or lower and require significant energy upgrades
- To date SEAI has supported over 450,000 homes with their home energy upgrade journey







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Home Energy Upgrade

Upgrade your home to be more energy efficient and discover a new world of comfort!

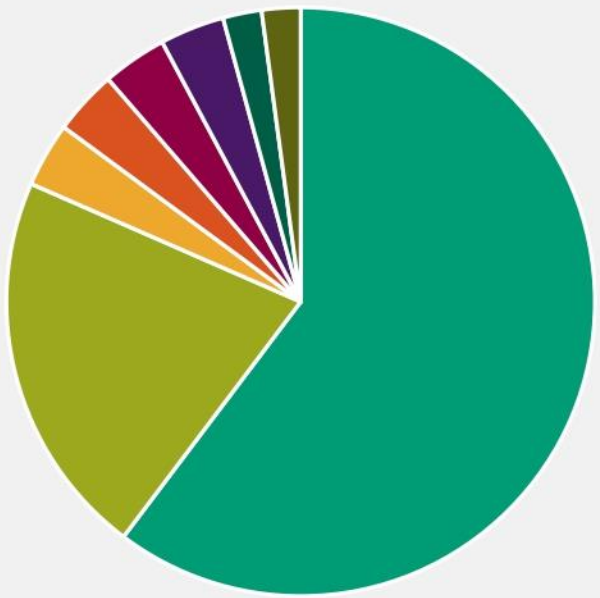


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Home Heat Loss and Energy Use

Houses account for a quarter of all energy consumption in Ireland

Heating accounts for 80% of your home energy





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Home Heat Loss and Energy Use

Where you lose energy in your home...



Roof **30%**

Air infiltration **10%**

Walls **30%**

Doors & Windows **10%**

Floors **20%**



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Benefits of a Home Energy Upgrade

Comfort

Enjoy a warmer, cosier and healthier home by upgrading your insulation and adding renewables

Savings

Save on energy bills by using less energy and adding renewable energy to your home

Environment

Reduce your emissions and your carbon footprint with an energy efficient B2 home

Value

Increase the value of your property by upgrading your home to a B2 rating or higher



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Three Steps to a Home Energy Upgrade

Maximise the comfort and savings of your home with these 3 steps to a home energy upgrade

1. Assess



2. Insulate



3. Add Renewables



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1. Assess

- Don’t know where to start? Get a BER assessment of your home
- It will provide you with a roadmap to achieving a minimum B2 BER energy rating
- You will find a list of registered BER Assessors on the SEAI website: www.seai.ie

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2. Insulate

- The next step is to insulate your home and keep your valuable heat in!
- You may also need to replace old windows and doors to improve insulation
- SEAI offers homeowners insulation grants ranging from up to €1,500 for attic insulation up to €8,000 for external wall insulation

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3. Add Renewables

- Once your home is well insulated you should then consider adding renewable technologies
- Heat pump systems – a highly efficient alternative heating system to fossil fuel oil or gas boilers
- Solar PV – save between €200 - €300 per year on your domestic electricity bill
- Solar thermal systems – designed to meet 50-60% of hot water requirement
- SEAI offers renewable grants of €6,500 for heat pumps, up to €2,400 for Solar PV and €1,200 for solar thermal.

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Compare your Home Energy Upgrade Options

Free Energy Upgrade

- For qualifying homeowners in receipt of certain welfare payments
- Fully funded by SEAI
- This service is managed by SEAI
- Home survey
- Contractor selection
- Contractor works
- Follow up BER

One Stop Shop Service

- Complete home energy upgrade solution
- Part funded by SEAI
- One Stop Shop fully managed solution including grant application
- Multiple energy upgrades
- Pay for works net of eligible grant
- Minimum number of energy upgrades and achieve a min B2

Individual Energy Upgrades

- Selection of individual grants for home energy upgrades
- Part funded by SEAI
- Homeowner manages their own energy upgrade project
- Contractor selection
- Grant application
- Contractor works
- Pays for works and then claims grant back

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Home Energy Upgrade Grants

	Free Energy Upgrade	One Stop Shop Service	Individual Energy Upgrade
Home energy assessment	✓	✓	
Project management		✓	
Wall and roof insulation	✓	✓	✓
Floor insulation		✓	
Windows	✓	✓	
Heating controls	✓	✓	✓
Heat pump systems	✓	✓	✓
Solar water heating		✓	✓
Solar electricity		✓	✓
Ventilation	✓	✓	
BER assessment	✓	✓	✓

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Free Energy Upgrades

- Delivering free energy upgrades to qualifying homeowners who are in receipt of one of the following:
  - Fuel Allowance
  - One parent family payment
  - Family income supplement
  - Domiciliary care allowance
  - Jobseeker's allowance > 6 months & child under 7
  - Carer's allowance and lives with the person being cared for
- Fully funded and fully managed by SEAI through a panel of contractors
- Carry out a Home Assessment to determine the upgrades needed
- Assign a contractor to complete works
- Carry out a follow up BER
- Homes must be built and occupied before 2006 to be eligible

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One Stop Shop Service

- A complete home energy upgrade solution for homeowners and landlords
- Supports multiple energy upgrades in one go to achieve a minimum B2 BER rating
- Offers a wider range of grants offering up to 50% of the cost of works
- To pay for the works net of the eligible grant
- Fully managed solution from start to finish;
  - Home Energy Assessment
  - Contractor works
  - Grant application
  - Follow up BER
- To carry out a minimum number of energy upgrades and achieve a minimum B2 BER
- Homes must be built and occupied before 2011 to be eligible
- Choose from the list of registered one stop shops on the SEAI website: www.seai.ie

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Individual Energy Upgrade

- For homeowners and landlords who want to manage their own project
- Range of individual energy upgrade grants for insulation, heating and renewable technologies covering up to 50% of the cost of works
- Manage the grant application and works themselves
- Pay for the cost of works and claim the grant afterwards
- How to apply:
  - Choose your energy upgrade and grant
  - Select your SEAI registered contractor
  - Submit your grant application – must have grant approval before works commence
  - Get works done – 8 months to complete works and claim grant from date of approval
  - Submit you grant payment request – 4 to 6 weeks for payment
- Homes must be built and occupied before 2011 for insulation and heating controls, and before 2021 for renewable systems

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Community energy



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Sustainable Energy Community

A community that works together to develop a sustainable energy system for the benefit of the community

- Aiming to be as energy efficient as possible;
- Use renewable energy where feasible;
- Consider smart energy solutions

It can be as small as a street or as large as a county or region

Communities of active energy citizens will lead the societal transformation to a low carbon future





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Benefits of Sustainable Communities

Changing our energy use creates one of the biggest impacts for sustainability and the environment. Acting together means this impact goes even further

We can reduce energy bills in the community by doing local energy projects. This means we free up more money to spend in the community in the longer term.

Community energy projects mean warmer, healthier homes and community buildings. It improves quality of life, especially for the vulnerable in the community.



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Community Journey



LEARN

SEC Network

Community Network – open, collaborative, sharing and learning network. Levels of activity vary.

PLAN

Energy Master Plans

100% funding to develop an energy master plan to baseline energy use in the community and to identify a register of energy opportunities

DO

Community Grants

Capital grant programme to support community retrofit. Community role can vary from participation to project leadership.

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OVER 500 COMMUNITIES

Part of SEAI's Sustainable Energy Communities Network

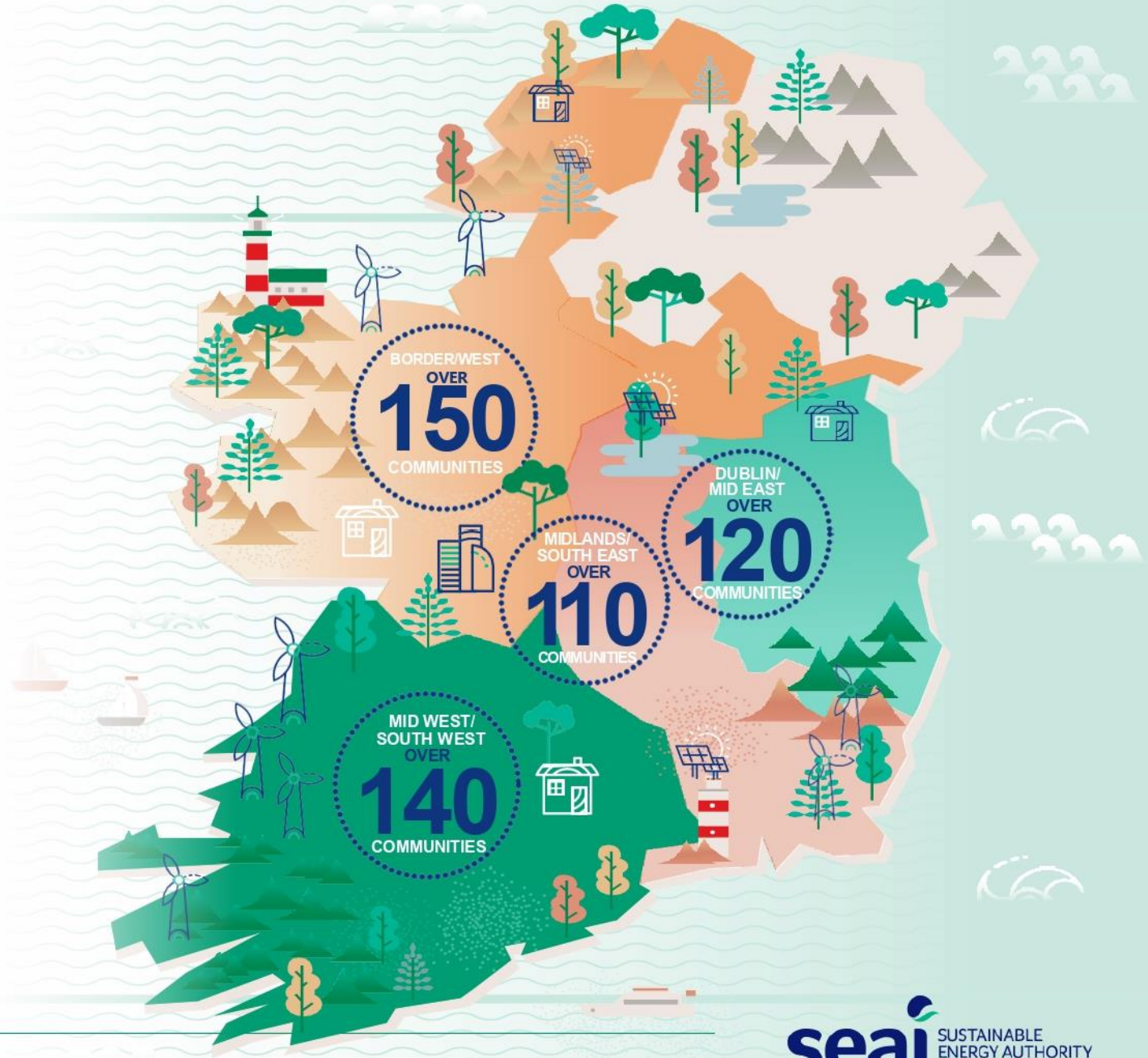
MORE THAN
25,000
CITIZENS ENGAGED

40 ENERGY MASTERPLANS COMPLETED

100
COMMUNITIES

Are currently working on their Energy Master Plans

Find out more at: www.seai.ie/sec



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Ballyphehane SEC





https://www.ballyphehanecommunity.com/ballyphehane-sec/

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Communities Grant

Assisting energy efficiency community projects through capital funding, partnerships, and technical support.

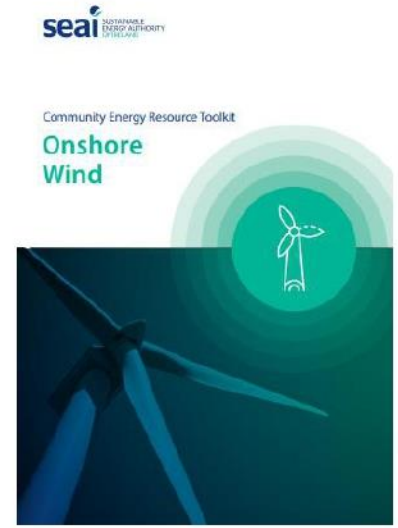
- Community oriented with a cross-sectoral approach, and you must show that you can sustainably finance the proposed project
- Encouraging smaller projects from €50k to large projects up to €5m
- Grant values range from 35%, to 80% for fuel poor homes
- 2020: Delivered 25 projects with funding of €18.5m. Upgraded 656 residential buildings to a minimum B2 rating and upgraded 240 non-residential

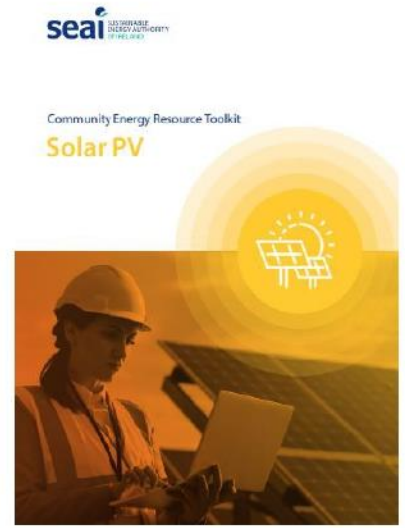


Renewable Energy Support Scheme

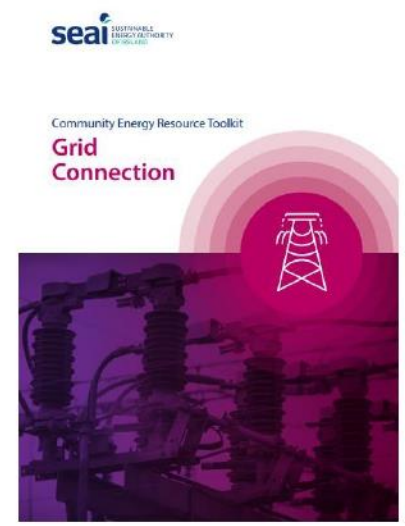
New Government scheme to support the development of renewable electricity projects in Ireland

- A dedicated Community strand – for those who want to generate renewable power
- SEAI is offering support. We will help you navigate your way through the journey
  - Expert support
  - Financial support
  - Information toolkit
- Further details email: **communityress@seai.ie**









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Thank you for listening

For more information visit **seai.ie**



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EirGrid

Energy Citizens Roadshow

Decarbonising Cork Cities Housing Stock

Brian Cassidy

Cork City Council

Decarbonising Cork Cities Housing Stock

Brian Cassidy FIEI
Housing Maintenance Climate Action Team

EirGrid “We are talking energy in Cork” event
Ballyphehane Community Centre,
10th November 2022: 18:30

Targets for Climate Action

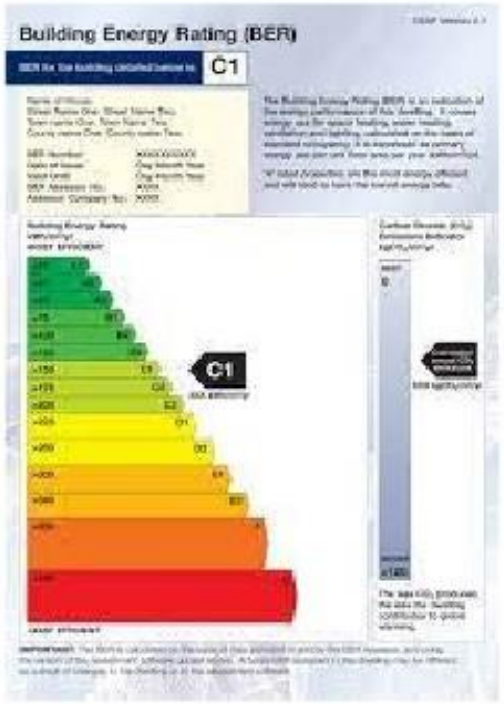
- Set by
  - government commitments to UN climate change goals
  - Irelands National Climate Action Plan 2019
  - Cork City Council Climate Action Plan (to be published)



COP27
SHARM EL-SHEIKH
2022 EGYPT

Targets for Building Stock

- Targets
  - 24,000 homes to achieve B2energy rating by 2030
  - All homes to achieve B2/COE standard by 2050 (95,000)
  - B2/COE Standard defined in the building regulation Technical guidance document Part L

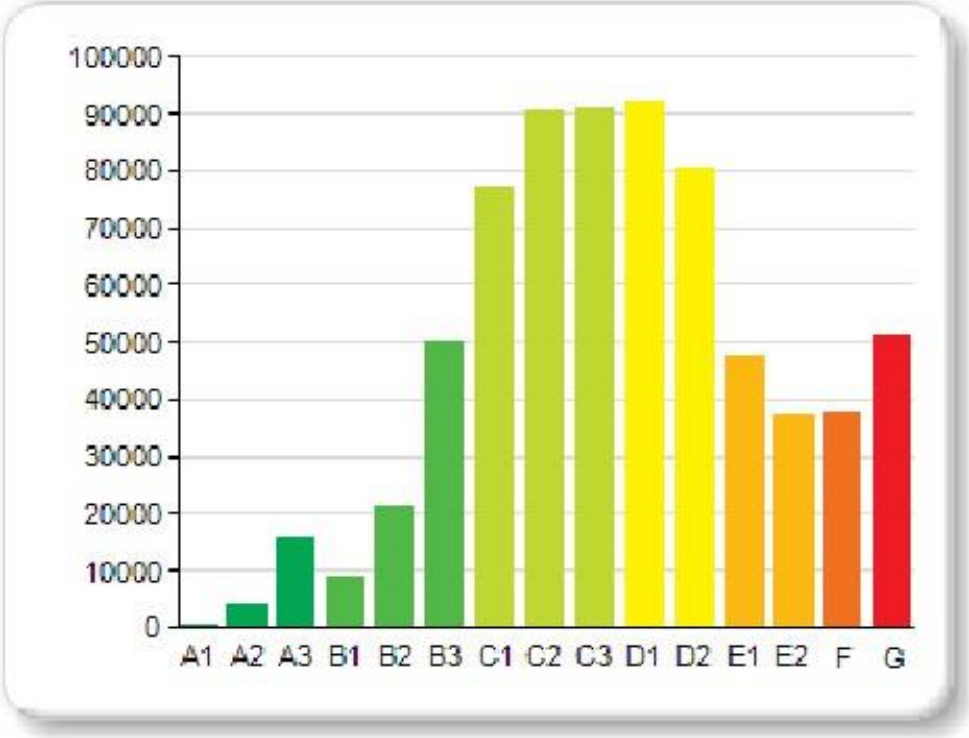




Current Energy Rating of Irish Homes

DOMESTIC BERs BY GRADE (On Public Register and Not Expired - Current)

Energy Rating	Quantity
A1	48
A2	4,169
A3	15,501
B1	8,718
B2	20,925
B3	50,188
C1	77,337
C2	90,342
C3	91,028
D1	92,045
D2	80,556
E1	47,133
E2	37,126
F	37,456
G	50,926
Total	**703,498**



Cork City Council Activities

1. Bring the Social Housing Stock up to the B2 energy rating:
   a. 25% by 2050 (2750 houses)
   b. 100% by 2050 (11,000 houses +).
2. Participation in research and pilot projects demonstrating the potential benefits of new technologies - partnerships with UCC/MTU and other European bodies.
3. Providing advice to the public (HEUGO)

Research Projects

1. Interreg Europe Empower Project
2. Interreg Europe Intensify Project
3. Interreg North Sea Indu-Zero project
4. Interreg North West Europe RED-WOLF project
5. Horizon 2020 MiniStor project
6. Horizon 2020 Upstairs project
7. Act4 Eco

Interreg Europe Empower Project Indus

Aim:

exchange of good practices on dynamically monitoring energy efficiency in buildings, with special focus on the use of innovative financial instruments, in order to achieve more carbon reduction and to improve low-carbon economy policies.

EMPOWER
Interreg Europe



Irish Partner: Southern Regional Assembly
Cork City Council - stakeholder



Start: May 2017
End: May 2022

Website: https://projects2014-2020.interregeurope.eu/empower/

COMHAIRLE CATHRACH CHORCAÍ
CORK CITY COUNCIL

Tionól Réigiúnach an Deiscirt
Southern Regional Assembly

Interreg Europe Intensify Project

Aim: Change behaviour and reduce GHG emissions through intense community engagement

Irish Partner: Cork City Council

Regional Action/Pilot Action :

(1) Provide physical one stop shop for energy retrofitting

(2) Provide on-line platform to enable people to engage with each other and form their own energy communities

Start: May 2018

End: May 2023

Website: https://projects2014-2020.interregeurope.eu/intensify/





Interreg North Sea Region INDU-Zero project

Aim: develop a **Blueprint** for a fully automated Domestic energy Retrofitting factory within four years

Interreg North Sea Region INDU-ZERO
European Regional Development Fund
EUROPEAN UNION

Advisory Partner: Cork City Council



Start: May 2018
End: May 2022

Website: https://northsearegion.eu/indu-zero/

Video:
https://www.youtube.com/watch?v=ytTTI5JBGLU&t=23s

COMHAIRLE CATHRACH CHORCAÍ
CORK CITY COUNCIL

Smart Renovation Factory
by INDU-ZERO

Interreg North Sea Region Red-Wolf Project

Aim:

increase renewables' usage and reduce CO2 emissions for Homes with electric storage heaters, PhotoVoltaic, and targeting low carbon electricity from the grid

Irish Pilots:

Cork City Council providing 10 pilot sites

Carbery Housing Association providing 4 x pilot sites



Irish Academic Partner: Atlantic Technological University, contract Research Unit, Sligo

Start: January 2018

End: October 2023

Website: https://www.nweurope.eu/projects/project-search/red-wolf-rethink-electricity-distribution-without-load-following/#tab-1

Horizon 2020 MiniStor Project

Aim: design, develop and install a novel compact, integrated thermal storage system for achieving sustainable heating, cooling and electricity storage that can be adapted to new and existing residential buildings.

Lead Partner: IERC, Tyndall UCC

Irish Pilot: Cork City Council providing 1 x home

Start: November 2018

End: October 2023

Website: https://ministor.eu/

Video: https://www.youtube.com/watch?v=DvF-Nb9_Xpk&t=3s



Horizon 2020 UpStairs project

- **Aim**:
- Accelerating the creation of energy communities and collective action
- Supporting citizens and municipalities in becoming prosumers
- Testing new energy service model frameworks of One-Stop-Shops which support local stakeholders in working together



Lead Partner: IERC, Tyndall UCC
Irish Pilot: Cork City Council

Start: October 2019
End: September 2023

Website: https://www.h2020-upstairs.eu/

Video: https://www.h2020-upstairs.eu/fileadmin/UP-

MacAirH Factsheet

MTU
Ollscoil Teicneolaíochta na Mumhan
Munster Technological University

- Timeline: **2022 - 2025**
- Funding Body: **SEAI RD&D Fund**
- Focus: **Heat Pumps**
- Research Team: **MTU & UCD**
- Partners: **Cork CC, Wexford CC, 3cea, Dublin CC**

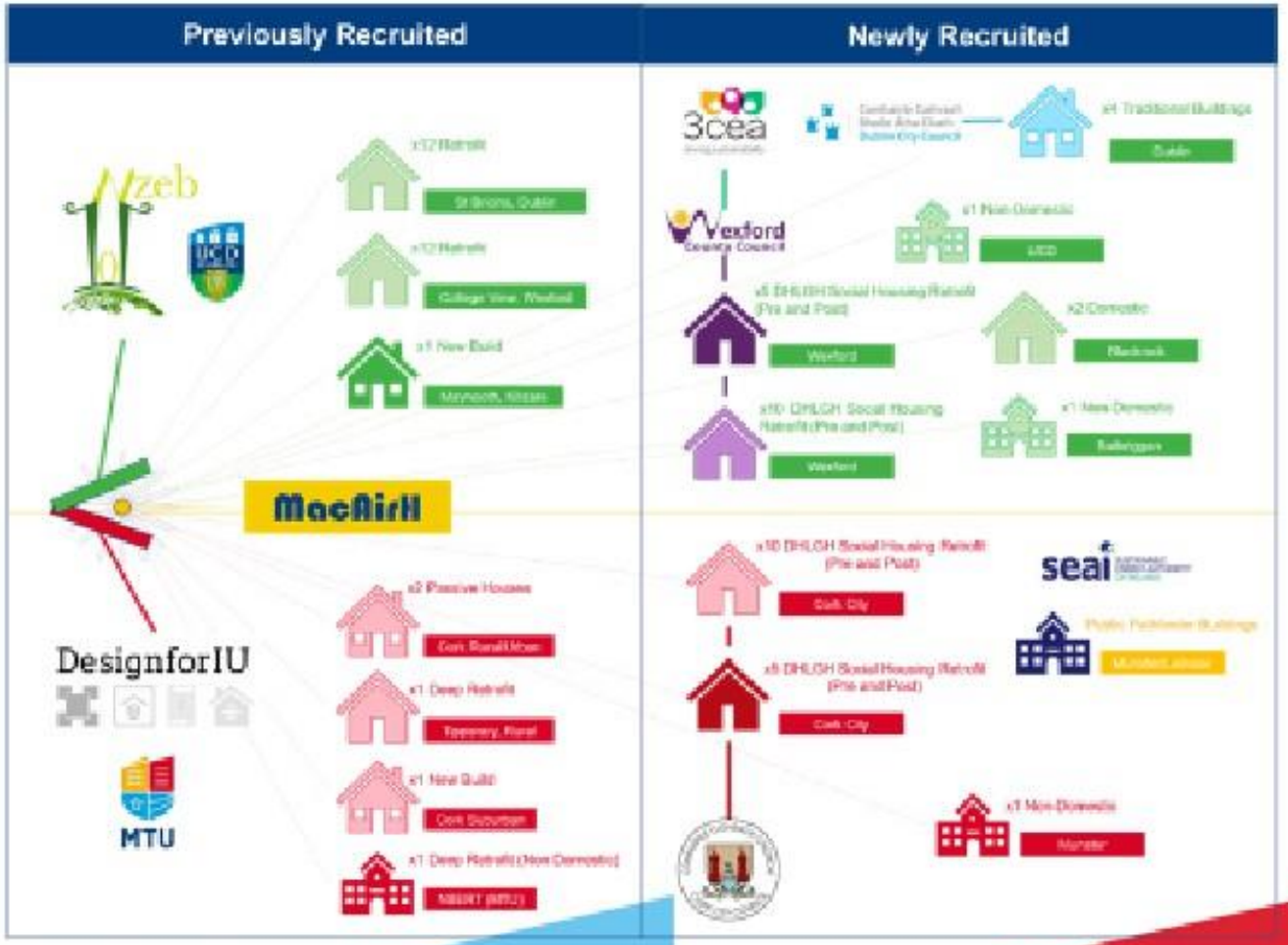
- Follow on from nZEB101 & DesignForIU, both SEAI HP research projects

- Monitor, Compare, Model & Analyse in-use performance of air source heat pumps in largest national sample size to date.

- Circa **60** heat pumps monitored nationally (domestic & non domestic with heterogeneous types and applications).

- Air to Water Heat Pumps & Exhaust Air Heat Pumps will be monitored.

- **Pre** and **Post** retrofit monitoring (indoor environmental quality + HP system performance)



https://www.seai.ie/data-and-insights/seai-research/research-database/research-projects/details/macairh:-monitoring-and-comparing-of-air-source-heat-pumps

ACT4ECO.



- is an **open e-learning platform** .
- The ACT4ECO platform is **freely** available to all EU Citizens
- aims to empower citizens to reduce their energy consumption in the household.
- seeks to bring users through a **ladder of change** from motivation to exploration and finally to action and behaviour change.
- Project Partner : University College Cork
- Stakeholder: Cork City Council





Find us at: Act4eco - https://act4eco.eu/





If you want to know more about the Act4Eco project, please contact the community coordinator - Lars Klüver (DBT) lk@tekno.dk, Wendy Rowan & Stephen McCarthy (UCC) wendy.rowan@ucc.ie, stephen.mccarthy@ucc.ie

C

Home Energy Upgrade Office

Aim: To provide independent advice to people and others on the retrofitting of the their homes to ensure they achieve the B2 energy rating



Funding:
Cork City Council
Interreg Europe Intensify Project Pilot Action
Horizon 2020 Upstairs project
SEAI



Opened: 30th May 2022

Opening Hours: 09:00 to 13:00 and 14:00 to 17:00 Mon. to Fri.

Web Page:
https://www.corkcity.ie/en/council-services/services/housing/interreg-europe-projects/home-energy-upgrade-office-heugo-.html
Web Page: Home Energy UpGrade Office (HEUGO) - Cork City Council



Location: Kiosk #1, Grand Parade, Cork (Outside bishop Lucey Park)
Eircode: T12 CKV9

You are encouraged to drop in anytime during opening hours

Thank You





EirGrid
Energy Citizens Roadshow

Questions and Answers



EirGrid
Energy Citizens Roadshow

Wrap up