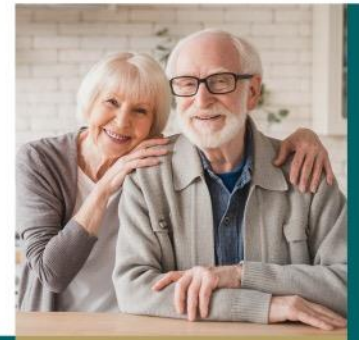
EirGrid

EirGrid.ie

Energy Citizens Roadshow

Monaghan

15 / 11 / 2023



Home Energy Grants and Upgrades

Micro-generation and Community Ownership



Regional and Social Development



EirGrid

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



What Shaping Our Electricity Future means for Monaghan

Michael Mahon, EirGrid





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.



Ireland’s electricity grid

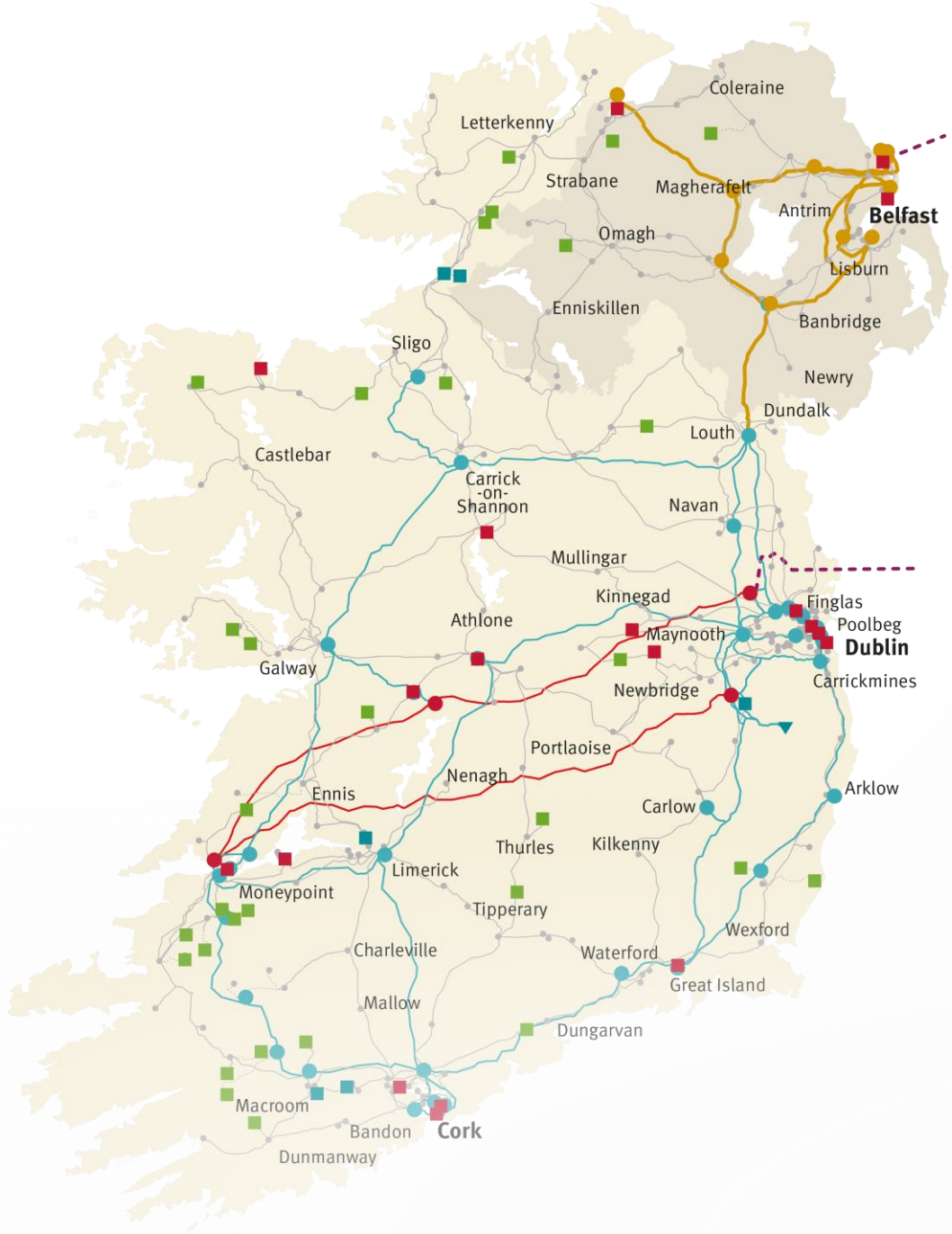
The grid gets into every corner of Ireland, bringing reliable power to homes, farms, schools, hospitals, and businesses.

There is approximately 9,500 km of high-voltage (110kV+) powerlines and cables across the island.

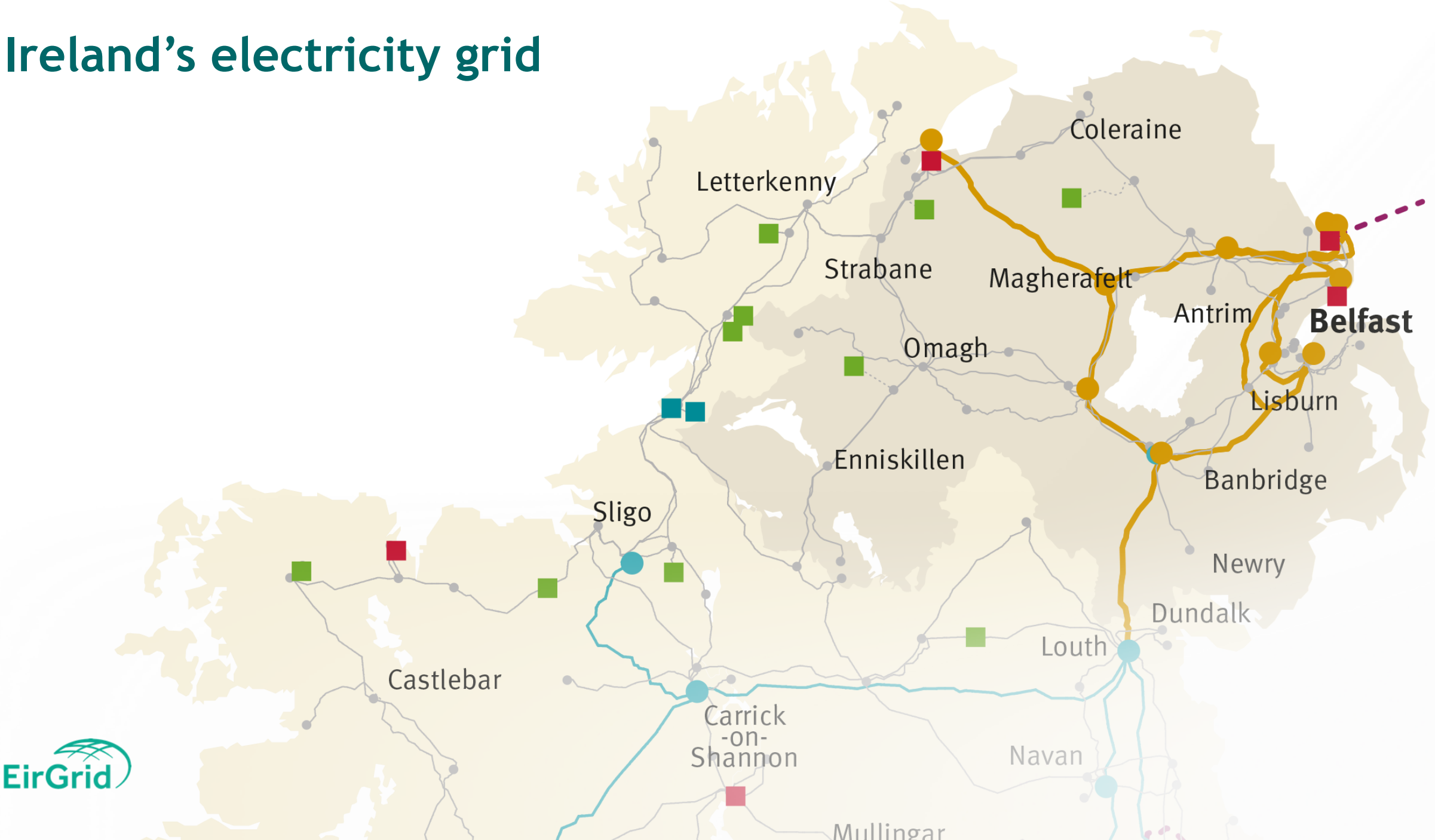
Peak demand during the cold snap last December was 7,031MW.

Electricity is getting greener all the time.

EirGrid



Ireland’s electricity grid



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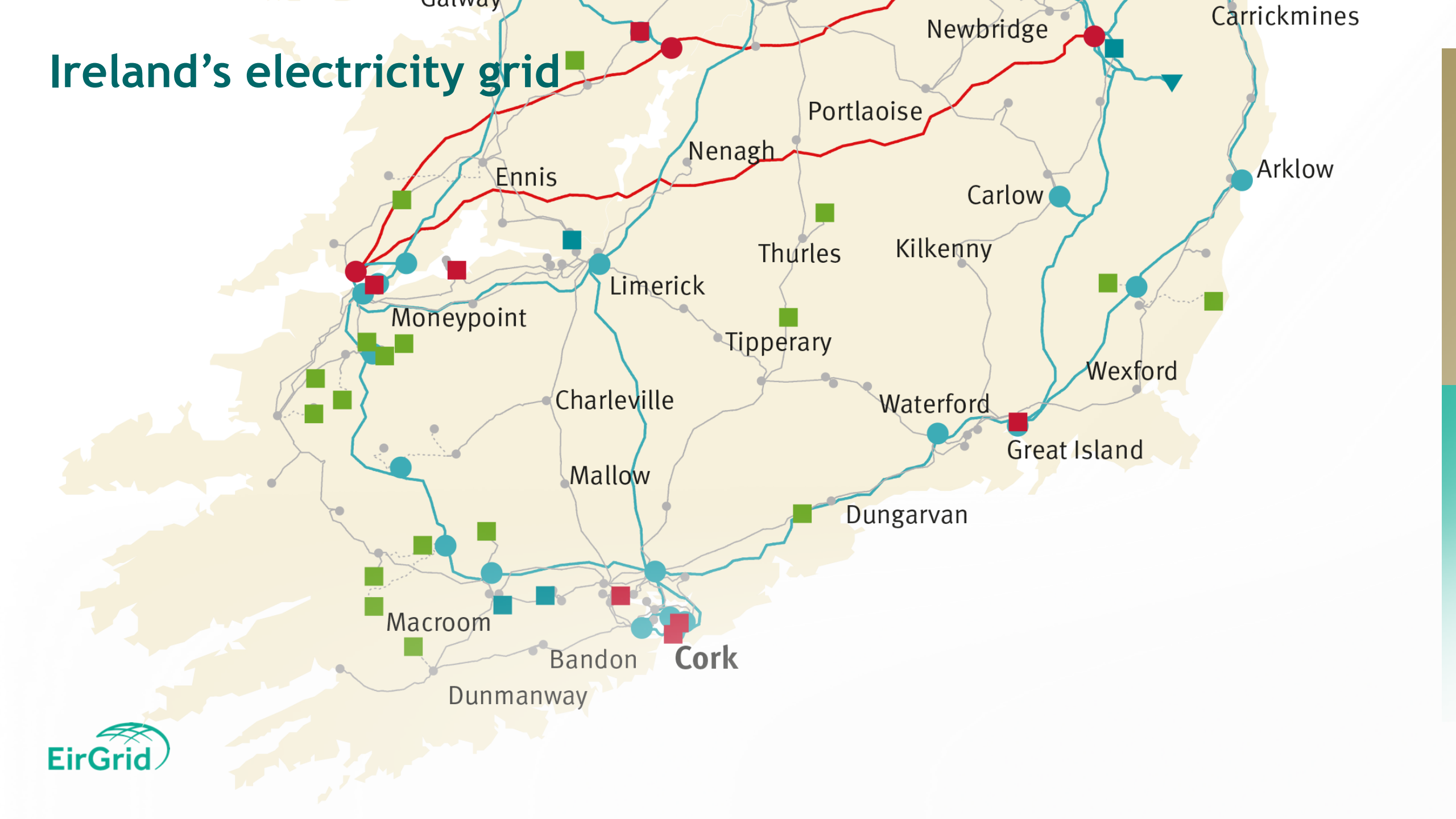
Ireland’s electricity grid



EirGrid

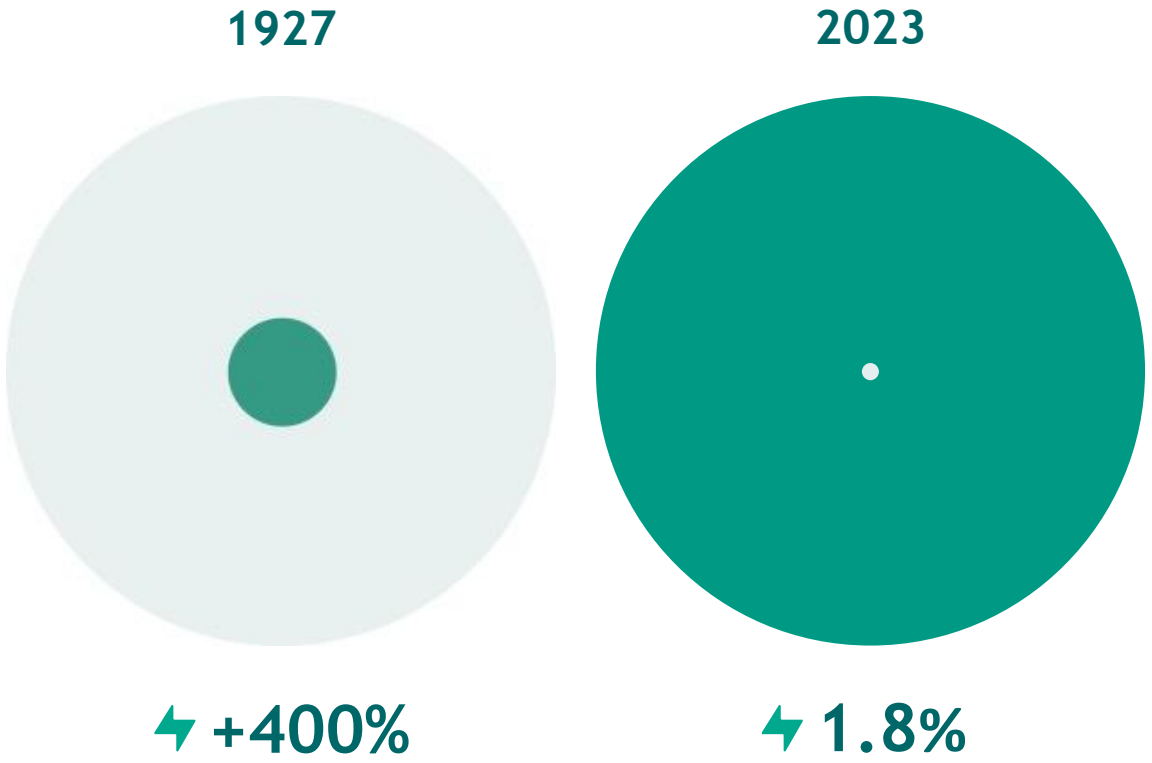

The Government has asked us to prepare the grid so up to 80% of Ireland's electricity can come from renewable sources by 2030
EirGrid

Ardnacrusha Hydroelectric Power Plant

In 1927, the Ardnacrusha hydroelectric power plant provided 4 times the amount of energy required (**400%)** by the country and was completed at a cost of one fifth of the Irish state budget. In 2023, it now represents approximate **1.8%** of our needs.

Amount of power needed

Power generated from Ardnacrusha



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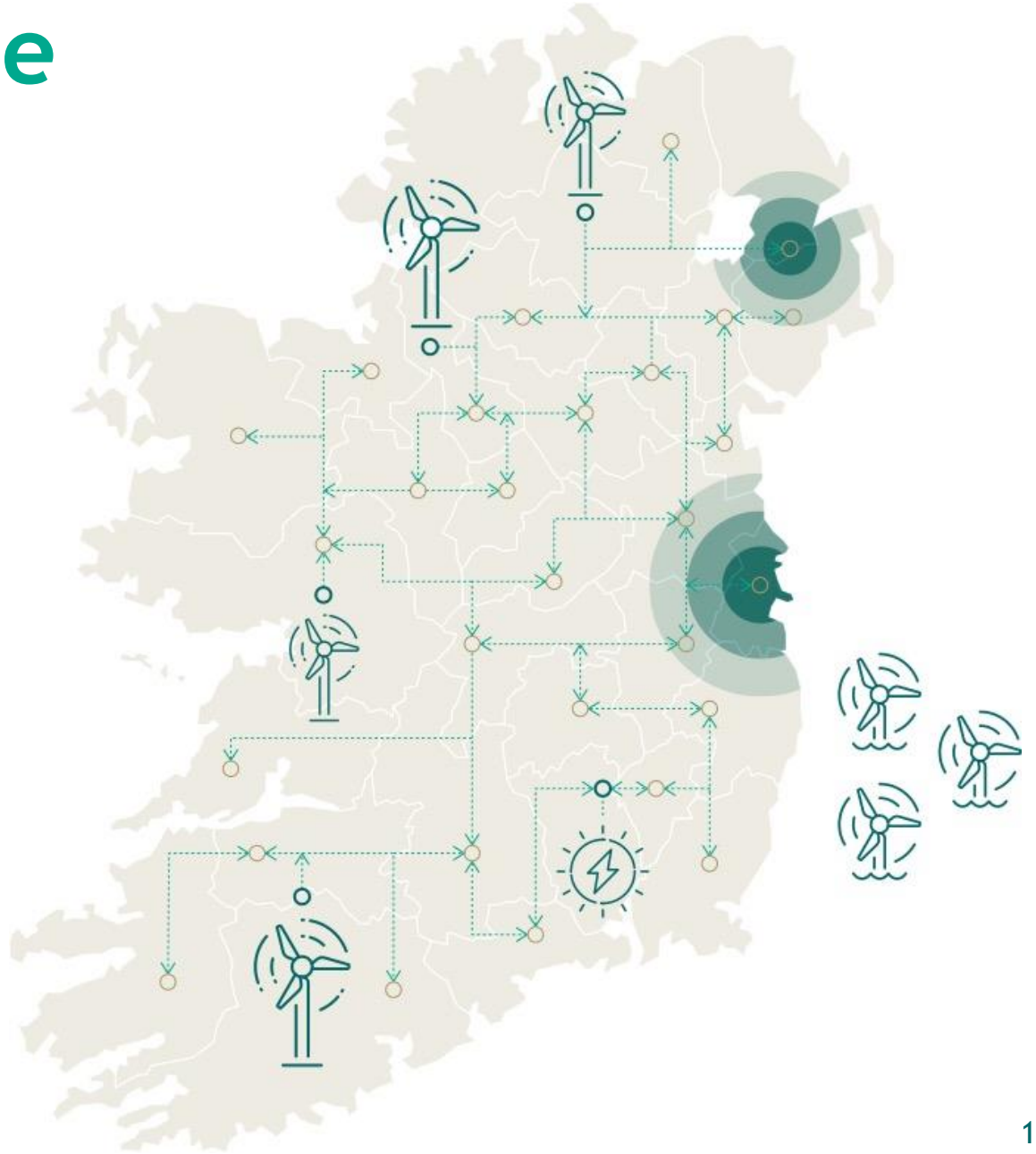
Context for preparing the plan

More electricity will be carried across the grid than ever before, and most of this power will come from renewable sources.

The grid needs to carry at least 17 GW more renewable electricity by 2030 – triple 2020 levels.

Power generated from renewable sources depends on the weather.

Renewable electricity is typically generated far away from where most electricity is used.



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What infrastructure will be required?

294

Existing
Projects
in the pipeline

40

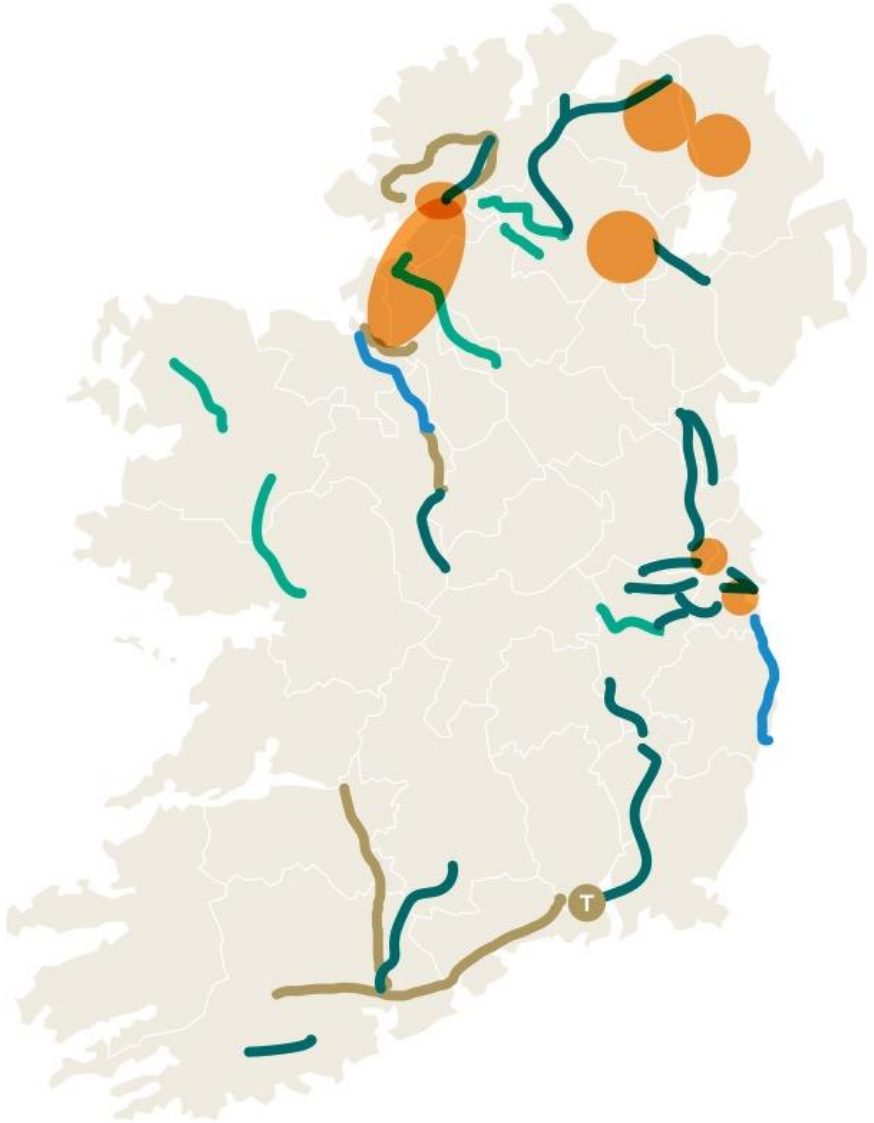
New Projects in Ireland

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

12

New Projects in Northern Ireland

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



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North South Interconnector

- This project will help to effectively eliminate constraint on cross border power transfer.
- Planning has been fully granted in both jurisdictions.
- Construction will commence in 2024 and will be completed in 2026.

Route Length	138km (100km in ROI)
No. of Towers	299 in ROI & 102 in NI
Other components	New 400/275kV substation in Tyrone
No. of landowners	NI 160; 50% of NI landowners have agreed terms for access & compensation ROI: Monaghan 190, Cavan 50, Meath 180, Engagement commenced at end of October on compensation proposals
Project activity	60 random tower sites surveyed in 2022 ESB Procurement complete in Q4
Construction duration	2-3 years



Ireland’s electricity grid

The grid gets into every corner of Ireland, bringing reliable power to homes, farms, schools, hospitals, and businesses.

There is approximately 9,500 km of high-voltage (110kV+) powerlines and cables across the island.

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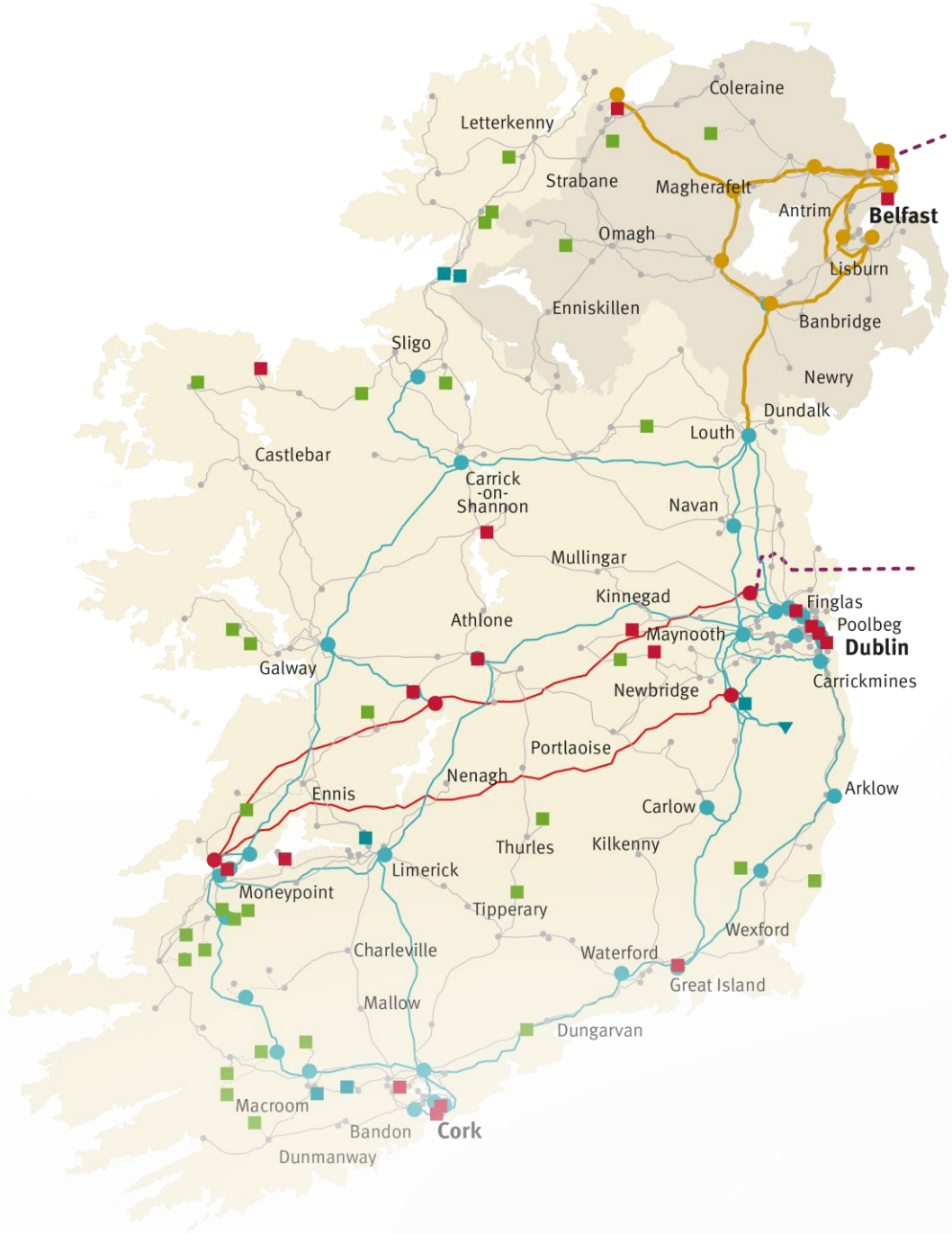
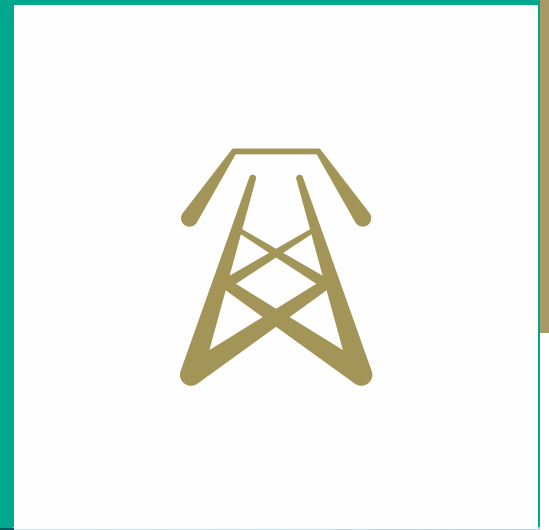


Summary

- Shaping Our Electricity Future Roadmap was published in November 2021.
- It provides a robust and deliverable plan for 2030 and ultimately towards a new zero carbon energy system by 2050
- To achieve renewable ambitions by 2030, significant network delivery will be required (existing projects, refurbishments, new projects)
- An update is due in the coming months to reflect new Government policy.





Thank you

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EirGrid

National Network, Local Connections, Microgeneration and Smart Meters

Gerry Noone, ESB Networks





EirGrid



EirGrid Energy Citizens' Roadshow: Kilkenny

Gerry Noone, Product Proposition Manager

Who We Are



Future Energy Customers



Our Services



Who is ESB Networks?

We deliver and connect electricity to 2.4 million homes and businesses. We play a central role in enabling climate action through the electrification of heat and transport as well as connecting renewables.



Delivering Electricity for 90 Years



180,000 km Network



€800m Annual Investment



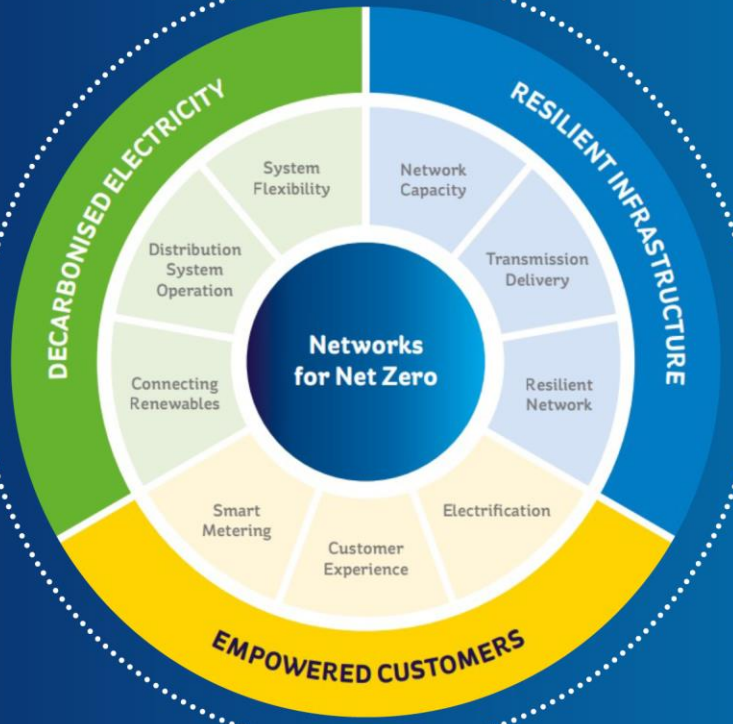
3,500 Employees nationwide

Our focus: Sustainability at our core

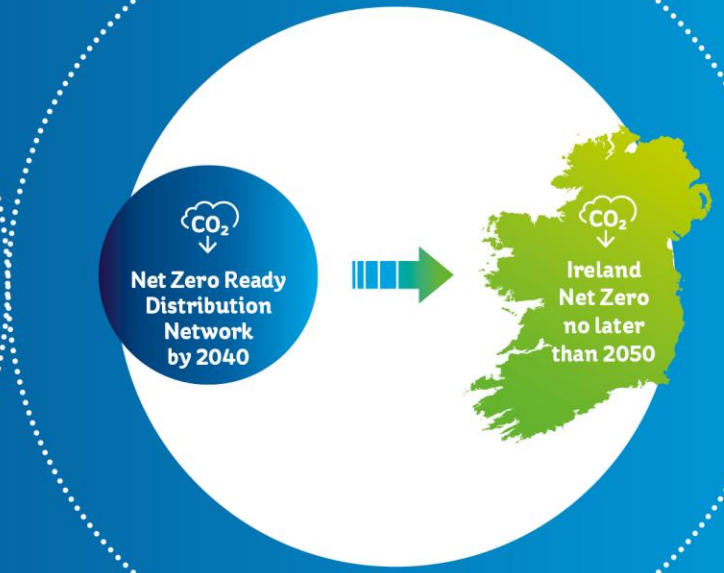
ESB Networks: Delivering Ireland's electricity network for a clean electric future



Delivering our Net Zero Strategy



Supporting Ireland's Climate Action Plan



Where do customers fit into all this ‘sustainability’ NOW ?

Customers will play an essential role in achieving the ambitious climate change targets….



Right now :

- +18,000 domestic customers are delivering demand flexibility by signing up to Is This A Good Time?
  - Get involved at esbnetworks.ie/weather
  - +40 commercial customers are supporting the efforts to help with security of supply
- +400,000 customers adopting solar/heat pump technology
- + 34,000 customers adopted for EV's in 2023
- +68,000 participating in microgeneration
- 1 million Solar Panels across Ireland
- Community energy projects

(numbers correct as of August 2023)

Where do customers fit into all this future ‘sustainability’?

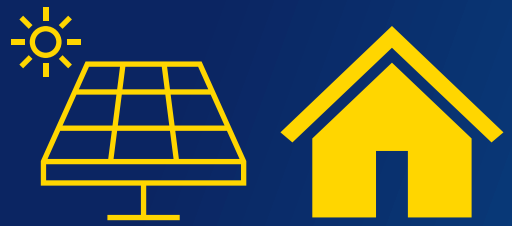


Our Services

- Connection of Micro Generation & Mini Generation
- ESB Networks Online Account
- National Smart Metering Programme
- Security of Supply – Initiatives



Connecting Micro-Generation



Think solar panels on the roof of the home



NC 6 Form



Free of cost

(numbers correct as of August 2023)

Connecting Mini-Generation



NC 7 Form

Approx €1,000

(numbers correct as of August 2023)

Smart Metering

Over 1.4 million smart meter installations across the country



Supports micro gen



View your electricity usage on your ESB Networks Online Account



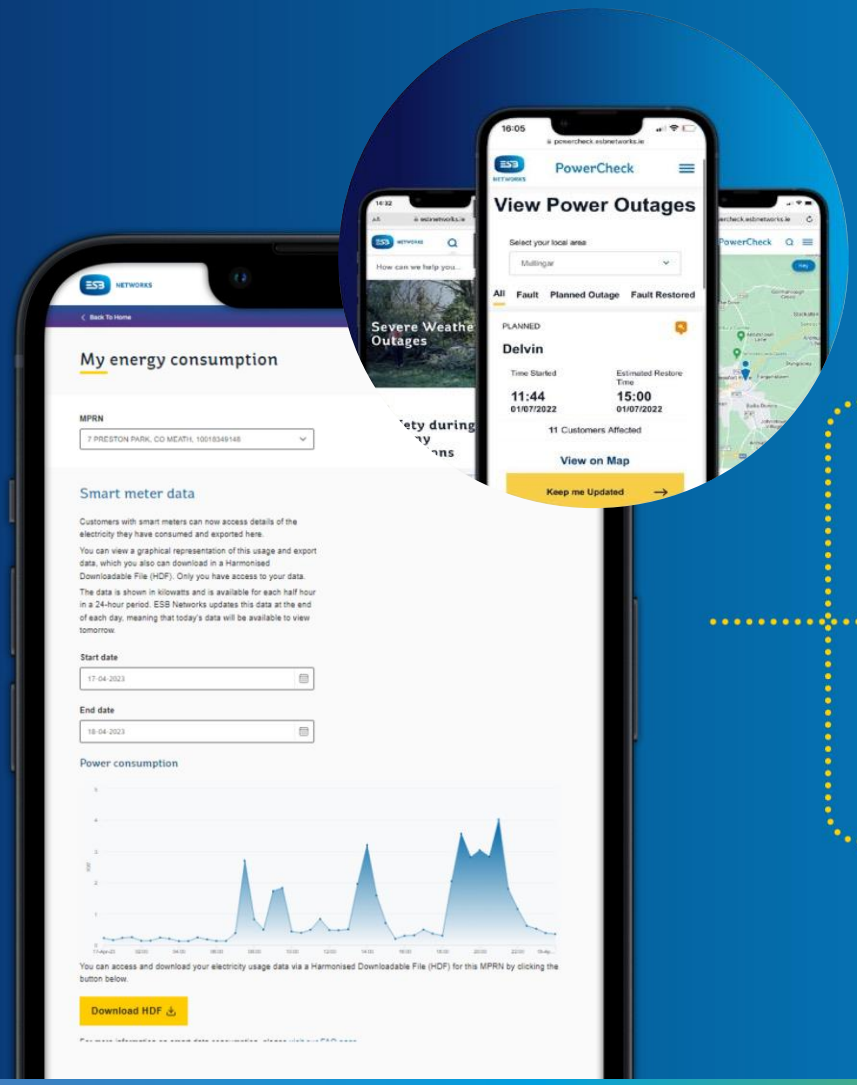
Empowers all electricity customers to take control



No more estimated bills

ESB Networks Online Account

- Access your energy consumption data
- Submit Your Meter Reading
- View Your Power Outage Status



- Find my MPRN (Personal Meter Identifier)
- Apply & Track Connections (Homes & Business)
- Participate in ‘Is This a Good Time?’

Sign up to our ‘Is This a Good Time?’ Customer Programme



- Get useful information and tips to help you learn how to **take control** of your home's electricity usage.



- Find out **when the best times are** to use your electrical appliances (i.e. outside of peak hours of 5-7pm or when renewable electricity is being generated).



- Get **rewarded** for taking control when prompted (via energy events).

esbnetworks.ie/weather

Beat the Peak Business

The scheme has been set up for commercial electricity users and specialised energy management companies to provide flexibility services to the Irish electricity network.



PURPOSE

The purpose of the scheme is to:

- Shift demand during peak evening periods to alleviate potential tightness on the network and mitigate System Alerts.



SERVICE DETAILS

During the scheme, commercial electricity users will be asked to reduce demand reduction between 16:30 – 19:00, Monday – Friday (excluding public holidays).



SETTLEMENT

- Service Assets will be remunerated for reducing demand on a daily basis and for Peak Events that are call by ESB Networks.
- Service Providers will be remunerated for recruitment and management of Service Assets.

Find out more by visiting esbnetworks.ie/business or if you have any questions, please reach out to our team at btp@esb.ie



Q&A





engagement@esbnetworks.ie

SEAI Supports for Communities and Households

Mel Gavin, 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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2022 Achievements

Citizens and communities



€300 million
Government funds invested in Ireland's clean energy transition

grant support towards over **27,200** home energy upgrades including more than **4,000** energy poor homes

700+
in the sustainable energy communities network

24
community energy projects funded with €63 million

10,894
electric vehicles and over **16,000** home charging units supported

760
school workshops where over 19,000 students participated

130,000+
BERs published through SEAI systems

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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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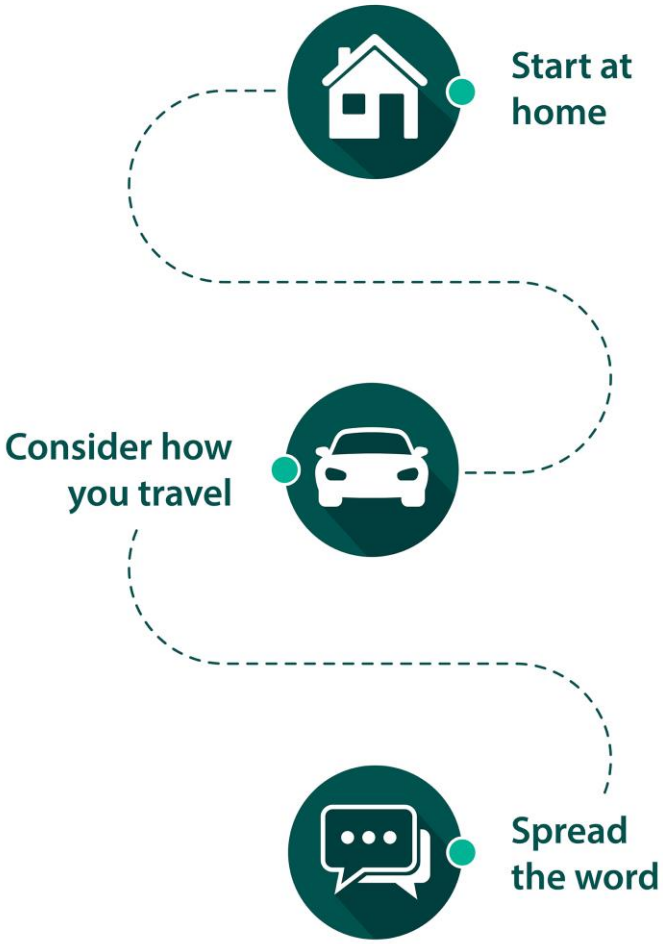
Where do I start?



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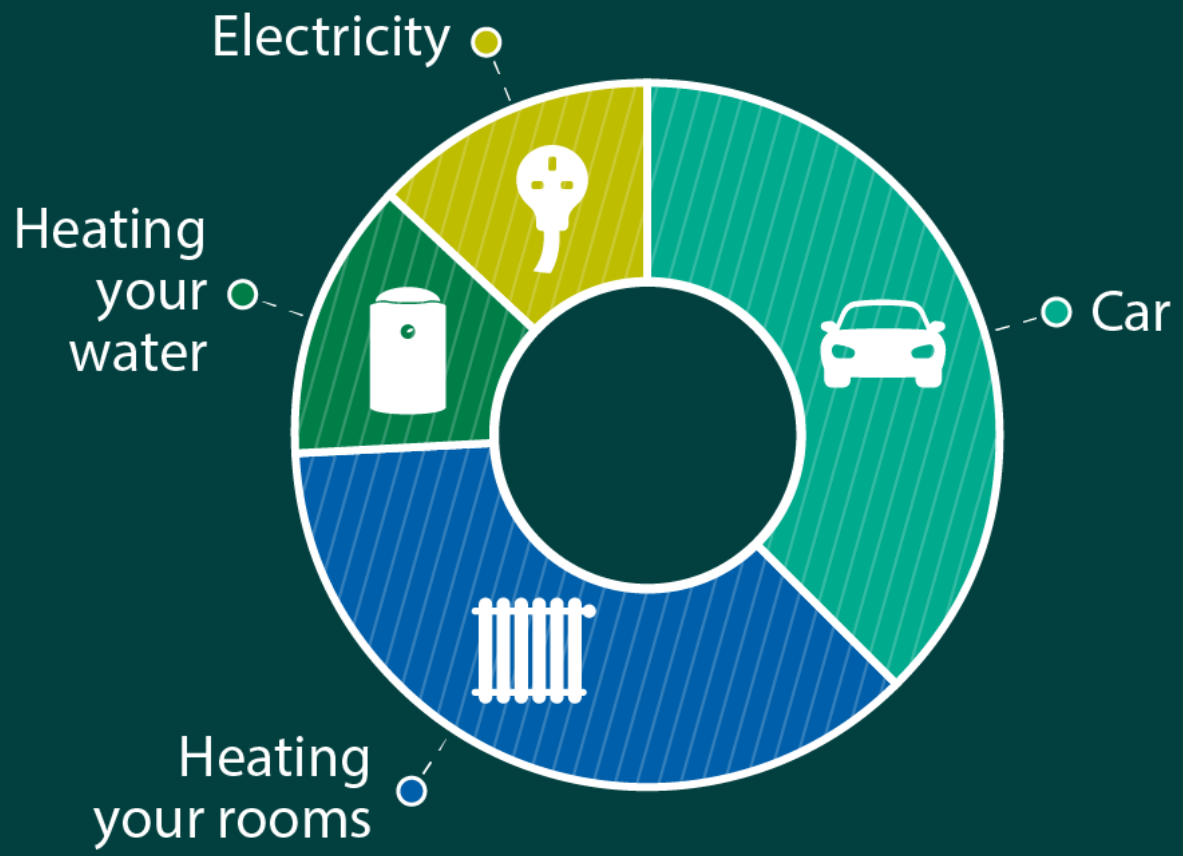
Where do we use energy in our everyday lives?



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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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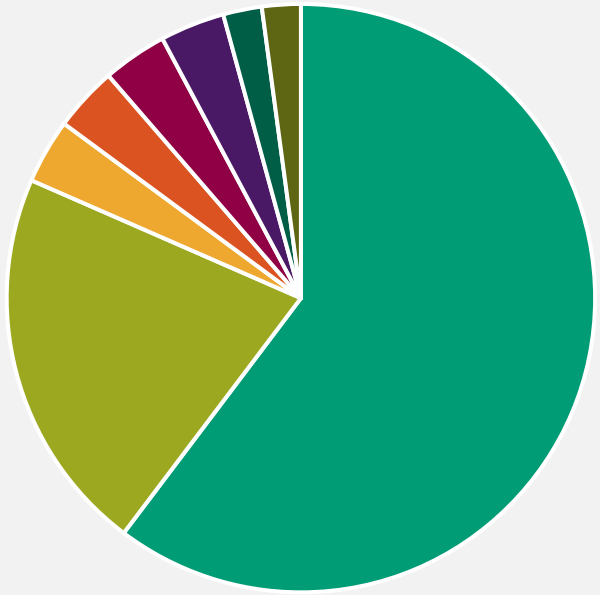
Home Heat Loss and Energy Use

Houses account for a quarter of all energy consumption in Ireland

Heating accounts for 80% of your home energy



- Space heating
- Water heating
- Cold appliances
- Consumer electronics
- Cooking
- Lighting
- Wet appliances
- Miscellaneous



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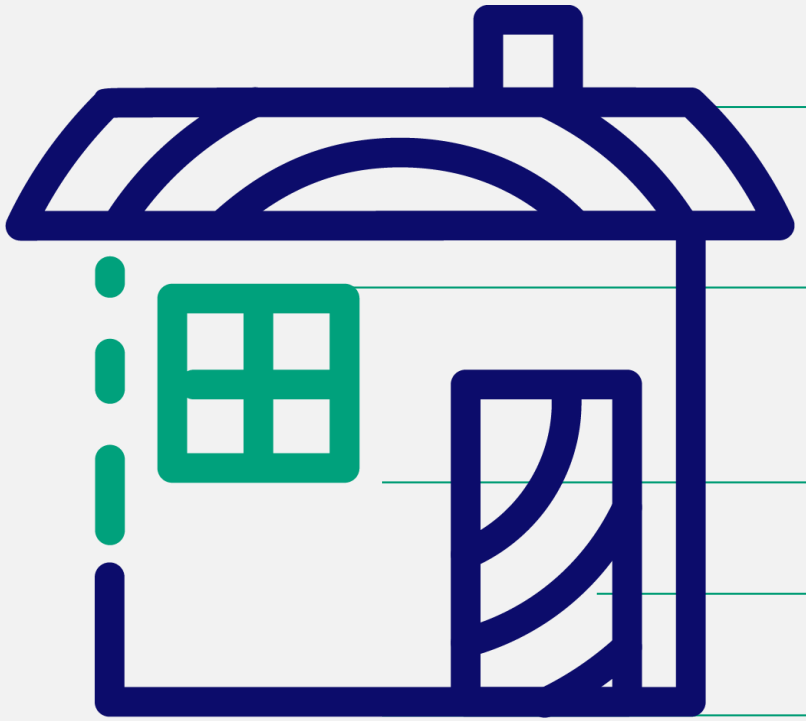
Home Heat Loss and Energy Use

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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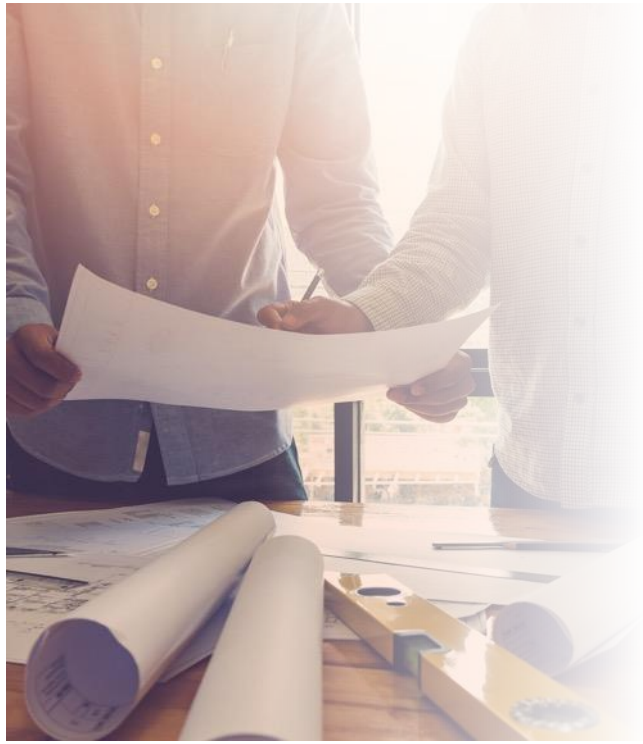
Three Steps to a Home Energy Upgrade

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



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
  - Disability Allowance for over six months and have a child under seven years of age
- 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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One Stop Shop Service

- You can access a wider range of grants using a One Stop Shop than if you were to manage the project yourself.

Energy Upgrades	Detached	Semi-Detached / End Terrace	Mid Terrace	Apartment
Heat Pump	€6,500			€4,500
Central Heating System for Heat Pump	€2,000			€1,000
Heat Pump Air-to-Air	€3,500			
Heating Controls only	€700			
Launch bonus for reaching B2 with a Heat Pump	€2,000			
Ceiling Insulation	€1,500	€1,300	€1,200	€800
Rafter Insulation	€3,000	€3,000	€2,000	€1,500
Cavity Wall Insulation	€1,700	€1,200	€800	€700
External Wall Insulation	€8,000	€6,000	€3,500	€3,000
Internal Wall Insulation	€4,500	€3,500	€2,000	€1,500
Windows (Complete Upgrade)	€4,000	€3,000	€1,800	€1,500
External Doors (max. 2)	€800 per door			
Floor Insulation	€3,500			
Solar Thermal	€1,200			
Solar PV	0 to 2 kWp €900/kWp 2 to 4 kWp €300/kWp			
Mechanical Ventilation	€1,500			
Air Tightness	€1,000			
Home Energy Assessment	€350			
Project Management	€2,000	€1,600	€1,200	€800

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One Stop Shop – Average Costs and Grant

One Stop Shop Service average costs and grants

Apartment



Average works cost
€42,875

Average grant amount
€14,267

Average cost to homeowner
€28,608

Average BER improvement
G 〉 A3

Typical upgrades:
- Heat pump
- Windows and doors
- Wall insulation

Mid Terrace



Average works cost
€51,826

Average grant amount
€19,015

Average cost to homeowner
€32,811

Average BER improvement
E1 〉 A3

Typical upgrades:
- Heat pump
- Windows and doors
- Wall insulation
- Ceiling insulation
- Ventilation

Semi-D/End Terrace



Average works cost
€60,292

Average grant amount
€21,694

Average cost to homeowner
€38,598

Average BER improvement
E1 〉 A2

Typical upgrades:
- Heat pump
- Windows and doors
- Wall insulation
- Ceiling insulation
- Solar panels
- Ventilation

Detached



Average works cost
€64,507

Average grant amount
€24,098

Average cost to homeowner
€40,408

Average BER improvement
E1 〉 A2

Typical upgrades:
- Heat pump
- Windows and doors
- Wall insulation
- Ceiling insulation
- Solar panels
- Ventilation

Key Figures

25% received energy upgrades at a cost of >€75,000

41% received energy upgrades at a cost of €50,000–€75,000

30% received energy upgrades at a cost of €30,000–€50,000

4% received energy upgrades at a cost of <€30,000

Average BER uplift
E1 〉 A2

Data based upon average costs for 363 private homes completed through One Stop Shops. (August 2023)

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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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Individual Energy Upgrade

- For homeowners and private landlords wishing to manage their own home energy upgrade, there are a range of individual energy upgrade grants.

Energy Upgrades	Detached	Semi-Detached / End Terrace	Mid Terrace	Apartment
Heat Pump	€6,500			€4,500
Heat Pump Air-to-Air	€3,500			
Technical Assessment	€200*			
Heating Controls only	€700			
Ceiling Insulation	€1,500	€1,300	€1,200	€800
Cavity Wall Insulation	€1,700	€1,200	€800	€700
External Wall Insulation	€8,000	€6,000	€3,500	€3,000
Internal Wall Insulation	€4,500	€3,500	€2,000	€1,500
Solar Thermal	€1,200			
Solar PV	0 to 2 kWp €900/kWp 2 to 4 kWp €300/kWp			

* The grant for the Technical Assessment is only payable in conjunction with the Heat Pump System grant

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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 770 COMMUNITIES

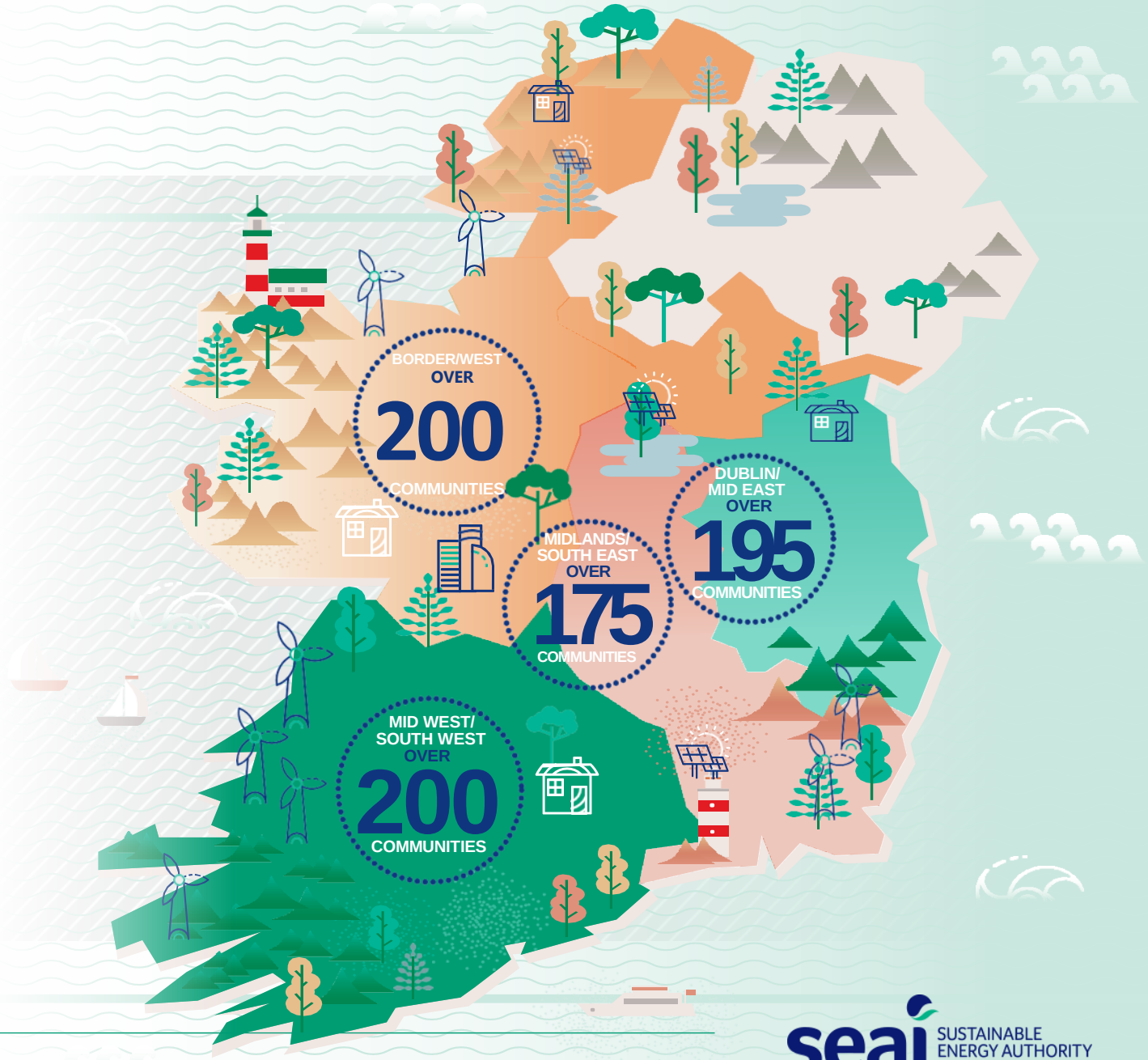
Part of SEAI's Sustainable Energy Communities Network

MORE THAN
37,500
CITIZENS ENGAGED

125 ENERGY MASTERPLANS COMPLETED

87
COMMUNITIES
Are currently working on their Energy Master Plans

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



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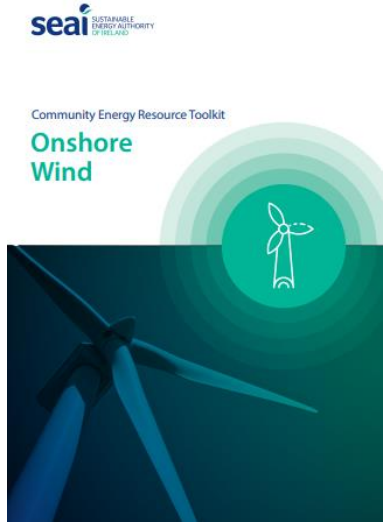
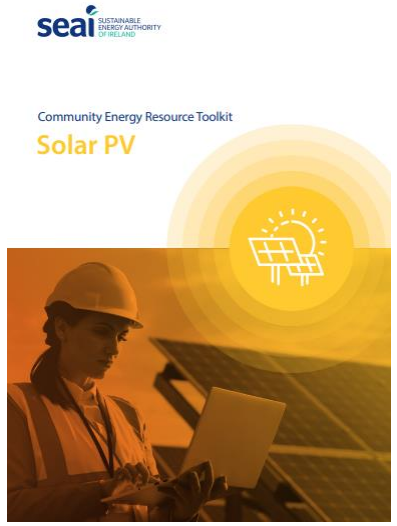
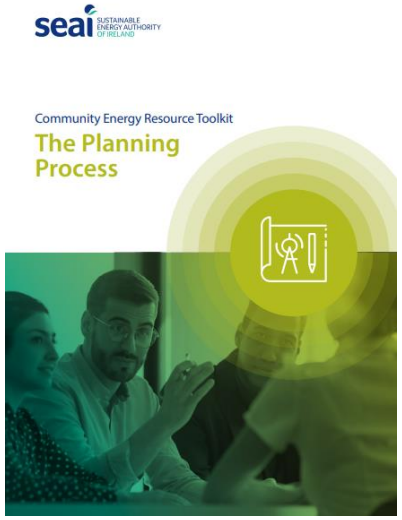
Community Enabling Framework

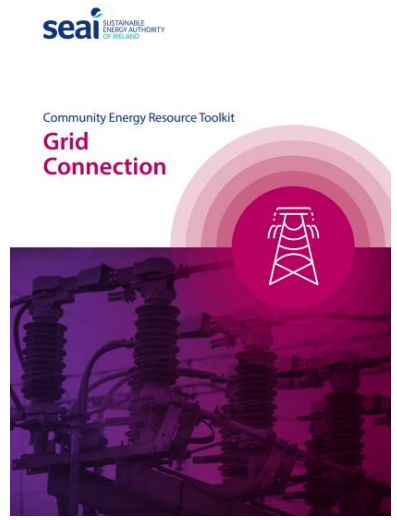
To support the development of 100% community renewable electricity projects in Ireland

- 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**
- County Grid Studies
  - Support identification of locations likely to have grid capacity
  - In person and online information sessions









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Communities grant scheme



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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



Communities



The aim is to engage all sectors in society to come together to support energy efficiency measures

Supports

Business 30%

Community 50%

Homes Fixed grants



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Non Domestic projects

Very large scale industrial projects



Community grants

No direct applications, we must have a collage of projects

Strongly recommend working with existing Project Coordinators

Application time line currently about 8 weeks

Contract time frame is 12 months

Maximum grant value €5M -
Therefore capital costs €15- €20M

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Communities scheme examples



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Retail

Tesco

Dunnes stores

Musgraves

Independent retailers



Hotels

Water

Air Conditioning

Heating

Cooling

Lighting



Distribution

Warehousing

Manufacturing

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GAA and other sports

Water heating

Floodlighting

Fabric

Heating



Church Community halls

Lighting

Heating

Fabric Insulation upgrades



Musgrave Pk

Large Scale sports facility

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Thank you



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