



Commissioners of
IRISH LIGHTS | *Navigation
and Maritime
Services*

Commissioners of Irish Lights **Climate Action Roadmap to 2030**



Map of Lighthouse Power Source



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01

FOREWORD

01.

Foreword

The Commissioners of Irish Lights is a 24/7 and 365 maritime safety organisation operating on an all-island basis.

Our Mission is Safety at Sea – *to be a leading and innovative provider of reliable, efficient and cost-effective navigation and maritime safety services for the safety of all.*

Our vision is to be a dynamic, forward facing maritime organisation, conscious of our long history and poised to deliver future safe, smart and sustainable maritime services – at the interface of navigation, technology, data and engineering.

We will do this by:

- Contributing to the safe development of the maritime economy and climate resilience.
- Continuously upskilling our people and teams to deliver new capabilities in the maritime space.
- Protecting our heritage and legacy.

Irish Lights operates an extensive network of general Aids to Navigation around the island of Ireland and regulates over 3,500 local aids to navigation, all of which serve as an essential National Infrastructure to support the safety of the maritime sector. We respond to wrecks and new dangers, provide statutory consents to public authorities and developers for local aids to navigation and we provide advisory, data, information and commercial services. Our services not only ensure safe navigation, but they contribute

to monitoring and protecting the marine environment and to supporting the sustainable development of our maritime industries.

Irish Lights operates in a harsh maritime environment, and we are very cognisant of the need for Climate Action, Mitigation and Adaptation measures at various scales. We welcome and endorse the Climate Action Plan 2025 and we are committed to playing our part in achieving its targets and objectives in line with our operational remit.

To date, Irish Lights has exceeded the target of 33% energy efficiency against the baseline of 2009. In 2024 we had achieved energy efficiency of 44.5% and we have a well-developed plan of how we will meet if not exceed the target of 50% increased energy efficiency by 2030.

Today's ability to generate power directly from the sun, sea and wind has had a dramatic effect on our provision of AtoN and enabled substantial environmental benefits and cost reductions. Many of our lighthouses have been converted to use photovoltaic solar power and all our buoys are solar-powered. Solar energy is used to charge powerful batteries which then power the light when it is required. With technological advances such as super-bright LEDs, solar panels and a reduction in the light range required for navigation, the power requirement for major lighthouses has been significantly reduced, while light intensity is maintained.

We welcome and endorse the Climate Action Plan 2025 and we are committed to playing our part in achieving its targets and objectives in line with our operational remit.

Given the remoteness of our infrastructure and use of a helicopter and/or ship for offshore operations, a high carbon footprint is unavoidable. However, technological progress has led to a reduction in this footprint and we are constantly investigating how this can be reduced further and monitoring our reductions year on year.

However, we face a considerable challenge in meeting the emissions target of a 51% reduction in greenhouse gases. All of our GHG emissions are energy related and our lighthouse vessel the Granuaile is responsible for 84% of all emissions. In order to meet the target, we will require a new more energy efficient vessel to be in service by 2030.

Irish Lights, has a leadership role to play in meeting national and international commitments to achieving climate action commitments. We will continue to deliver on this in conjunction with our partners across the Irish public sector, in the maritime sector and with our international colleagues working through IALA. Working with all of these stakeholders we will support the delivery of the UN Sustainable Development Goals to achieve a greener, healthier and safer future for all.

This Action Plan was shaped by the Board and staff of Irish Lights. It is our commitment that Climate Action has and will continue to be integral to Irish Lights policies, operations and the future development of our services.

Yvonne Shields O'Connor
Chief Executive





02

INTRODUCTION AND PROGRESS TO DATE



02.

Introduction and progress to date

Irish Lights has an organisation-wide Sustainability Strategy and Action Plan to enable and demonstrate our commitment to:

- Achieving high standards of sustainable practise in our operations
- Ensuring compliance with all applicable legal obligations.
- Ensuring that our activities are carried out minimising impact on the environment where reasonably practicable.
- Ensuring that pollution is prevented.

Irish Lights will encourage partnerships with stakeholders, including the community, our suppliers and employees to enhance sustainable outcomes. Sustainability will be integrated into our organisation and will include targets and initiatives in identified areas to tackle climate mitigation and adaptation.

In line with the legal framework of the Paris Agreement, and the United Nations Sustainable Development Goals, Ireland and the United Kingdom share commitments to reduce greenhouse gas emissions as soon as possible, in order to achieve a climate neutral world by 2050.

The Government's Climate Action Plan 2025 (CAP 25) sets out the energy efficiency and energy related Green House Gas (GHG) emissions reduction targets which Public Sector Bodies in Ireland are legally obliged to meet. It also mandates Public Bodies to develop a Roadmap setting out how they will deliver these targets.

This Climate Action Roadmap has been developed by Irish Lights in response to this obligation. It outlines work undertaken by Irish Lights to date and its approach to continuing to reduce carbon emissions from its operations by reducing energy usage and shifting energy sources from fossil fuels towards renewable and carbon zero energy sources.

In Northern Ireland, large public bodies are now required to report on their decarbonisation efforts by October 2025, specifically on carbon emissions and climate change adaptation plans, as mandated by the Climate Change Act (Northern Ireland) 2022. Irish lights do not currently have any reporting obligations under this Act in Northern ireland however we will continue to include reporting of all emissions including activities in Northern Ireland as part of the SEAI monitoring and reporting data.

Work on various sustainability projects has been underway in Irish Lights for many years as outlined in the Foreword. However, this document represents a comprehensive overview which demonstrates baseline readings, achievements to date, future goals and actions to meet the CAP 25 obligations. This roadmap includes an analysis of targets including any "gap to targets" that needs to be addressed. The layout of the document is in line with the SEAI climate action roadmap guidance template for small public bodies.



03

LEADERSHIP AND GOVERNANCE FOR CLIMATE CHANGE

03.

Leadership and Governance for Climate Change

The Climate Action Mandate requires that leadership and governance structures for climate action are set up and that staff are engaged with climate action and have appropriate training.

Irish Lights' Board will approve the organisation's Climate Action Roadmap and delegates overall responsibility for its implementation to the CEO. The CEO will ensure regular reporting to the Board. The CEO will assign lead responsibility for the implementation of this Climate Action Roadmap to the Director of Coastal Operations, who is a member of the Management Team. In this context the DCO will be designated as the organisation's **Climate and Sustainability Champion** as set out in the Public Sector Climate Action Mandate with responsibility for implementing and reporting on the Mandate.

The Director of Corporate Services, Director of ICT and Director of Navigation, Maritime & Consenting will be responsible to the DCO for the implementation of actions within their department.

The Support and Planning Manager will perform the role of **Energy Performance Officer**, reporting to the DCO.

The Health, Safety, Environmental and Quality (HSEQ) Manager will be responsible for monitoring and auditing the commitments made in this Climate Action Roadmap.



04

ENGAGING OUR PEOPLE

04.

Engaging our people

A Green Team is comprised of employees from across the organisation.

The Green Team focuses on employee training and engagement activities, maintaining the Green Hub and gathering employee input and ideas linked to this Climate Action Roadmap and our Sustainability Strategy and Action Plans.

The resources required to implement the Sustainability Actions Plans will be reviewed and agreed on a rolling annual basis and incorporated into annual budgets and operational plans.

Irish Lights sustainability objectives will be achieved by:

- Incorporating the agreed objectives, plans and budgets into departmental operational plans.
- Communicating goals and objectives adopted in the strategy and plan throughout the entire organisation.
- Engaging employees at all levels and within all parts of the organisation to contribute towards achieving the goals and objectives.
- Measuring and communicating progress towards goals and objectives on a regular basis and in a clear and simple manner.
- Recognising employee contributions towards achieving goals and objectives and targets and celebrating successes.
- Promoting health, wellbeing, diversity, and inclusion through engagement with various sources throughout the organisation such as the Workplace Wellbeing Group and the Human Resources Department.

The Head of Human Resources (HR) will work with the Energy Performance Officer and Management Team to identify initial awareness training for all employees along with specialist training for nominated persons. HR training strategies will incorporate climate action and sustainability training including technical and behavioural focused modules where appropriate. Training will be weighted towards online delivery to engage as many delegates as possible throughout the organisation for each event and to further demonstrate our commitment to sustainability.

Directors and senior management have attended a climate action leadership training course in 2024.

The Green Team will support employees through a series of initiatives to engage on climate issues and focus on the reduction of energy usage and GHG emissions.



05

ACHIEVING OUR ENERGY EFFICIENCY TARGET

05. Achieving our energy efficiency target

The target set for the Public Sector is an increased energy efficiency of **50% by 2030** from baseline of 2009.

Reducing energy consumption as low as reasonably practicable has been a priority of Irish Lights for many years and most of our lighthouses have been converted to use photovoltaic solar power and all our buoys are solar-powered. The energy requirement for major lighthouses has been significantly reduced, while light intensity is maintained. To date, Irish Lights has exceeded the target of an increase of 33% energy efficiency against the baseline of 2009. In 2024 we had achieved an increase in energy efficiency of 45% and are well placed to meet the 2030 target of 50%.

Our Achievements to date

Irish Lights has achieved this in a number of ways but primarily through the following measures;

1. The installation of **energy efficient light sources** at stations has greatly reduced electricity consumption over the period 2009-24.
2. Traditionally, rock stations were powered by diesel generators. All but one have now been solarised.
3. 38 of our light houses are mains powered procured from **renewable sources**.

4. Fitting of energy efficient lighting and **adjustments to the Building Management System (BMS)** control in our head office building.
5. The ship, ILV Granuaile's recorded **diesel usage has reduced** as a result of solarisation and consolidation of lighthouses.
6. Similarly solarisation, consolidation and the **removal of diesel engines** has resulted in less maintenance requirements and consequently **reduced use** of aviation fuel.
7. In late 2024 the chillers in our primary data centre were replaced. We anticipate that this will result in a reduction in energy requirement of approximately 60,000kWh.

Energy Reduction Progress

Irish Lights joined the Public Sector Energy Efficiency Initiative in 2014 and has recorded its energy usage on the SEAI supported database starting with our energy baseline year of 2009. Energy Efficiency means that the energy consumption is measured relative to an 'activity metric' which in Irish Lights case is the number of AtoN provided and maintained. This number has risen from 524 in 2009 to 558 in 2024.

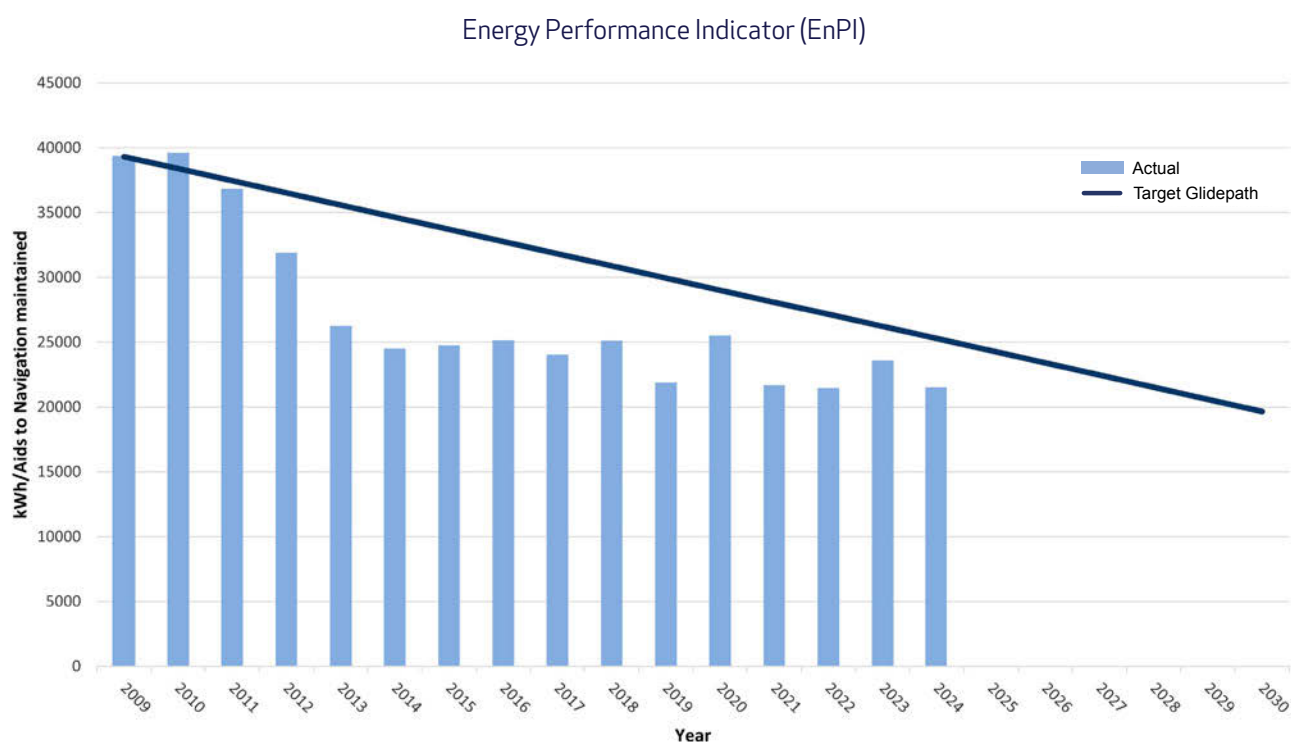
Energy Performance Indicator $\text{EnPI} = \text{TPER} / \text{Activity Metric}$

Irish Lights has achieved a reduction of **44.5%** and require **50% by 2030**.

Our target is a 50% energy efficiency improvement in 2030 relative to our energy efficiency baseline year, 2009.

	Total Primary Energy Consumption (kWh)	Total Final Energy Consumption (kWh)	Energy per AtoN (kWh)	No. of AtoNs	% Energy Reduction
2009 Baseline	20,604,052	16,359,366	39,321.00	524	0
2024 Actual	12,069,032	10,258,299	21,629.00	558	44
2030 Target	10,970,559	9,661,658	19,660.5	558	50

The graph below shows Irish Lights Energy Performance Indicator (EnPI) against the required glidepath to get to 50% by 2030.



The table below outlines our project pipeline where we plan to exceed 50% efficiency and continue on the ambitious trajectory that we have been on. This project pipeline includes a reduction in energy consumption for the replacement ship which should be in place before 2030. We anticipate the reduction in energy consumption could be anywhere between 10-15% and this will allow us to significantly exceed the targets set under the Climate Action Plan to 2030.

Project	Completion Year	Energy Savings (kWh)	Comment
Replacement of chillers in data server room	2025	60,000	Works completed start of 2025.
Kish Tower solarisation	2025	150,000	Reduced diesel delivery due to solarisation estimated at 90%. Works completed in 2025.
Natural gas consumption reduction in DL	2027	58,000	Proposal to replace one gas boiler with heat pump.
Coastal stations electricity consumption reduction	2028	54,000	Target to reduce consumption at coastal stations by 10%
Fastnet Rock solarisation	2029	30,000	Energy reduction as a result of greatly reduced diesel deliveries to station.
Granuaile fuel consumption reduction	2031	1,300,000	Conservative estimate of reduction in energy of new Granuaile due 2031.
TOTAL		1,652,000	



By far the greatest planned reduction is the 15% or 1,337,884 kWh attributed to the ILV Granuaile by 2030. The ship conducts operations continuously around the island of Ireland in order to fulfil the legal obligation of the State under the UN Safety of Life at Sea (SOLAS) convention regarding the provision of marine aids to navigation. Therefore, the ship is required to visit 141 buoys around coast on an eight-year cycle. Every buoy is visited and visually inspected annually, then selected buoys are lifted on deck every two years, in order to conduct maintenance to ensure safety for all mariners. In addition, the ship conducts checks of shore-based lighthouses and beacons in addition to supporting inspections of local aids to navigation. This planned work represents the minimum energy requirement to maintain maritime safety around the coast, and in turn prevent major pollution events due to ship collisions or groundings. Some energy savings are possible in this area by reducing the number of engines in use within safety constraints.

The ship is also used for unplanned work resulting from defects and outages arising in aids to navigation around the coast. These defects arise due to equipment damage or malfunctions, typically resulting from physical wave impact damage or water ingress in the harsh maritime environment. Reducing the number of such unplanned outages at the design and manufacturing stage represents a key mechanism in reducing energy use by the ship.

The areas with potential for energy reduction on the ship are shown in Green on the chart (right).

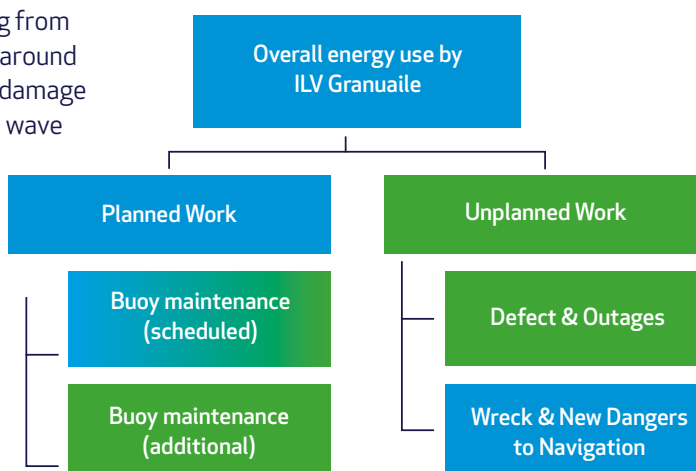




Photo: © Commissioners of Irish Lights

06

ACHIEVING OUR REDUCTION IN GREEN HOUSE GAS EMISSIONS

06. Achieving our reduction in green house gas emissions

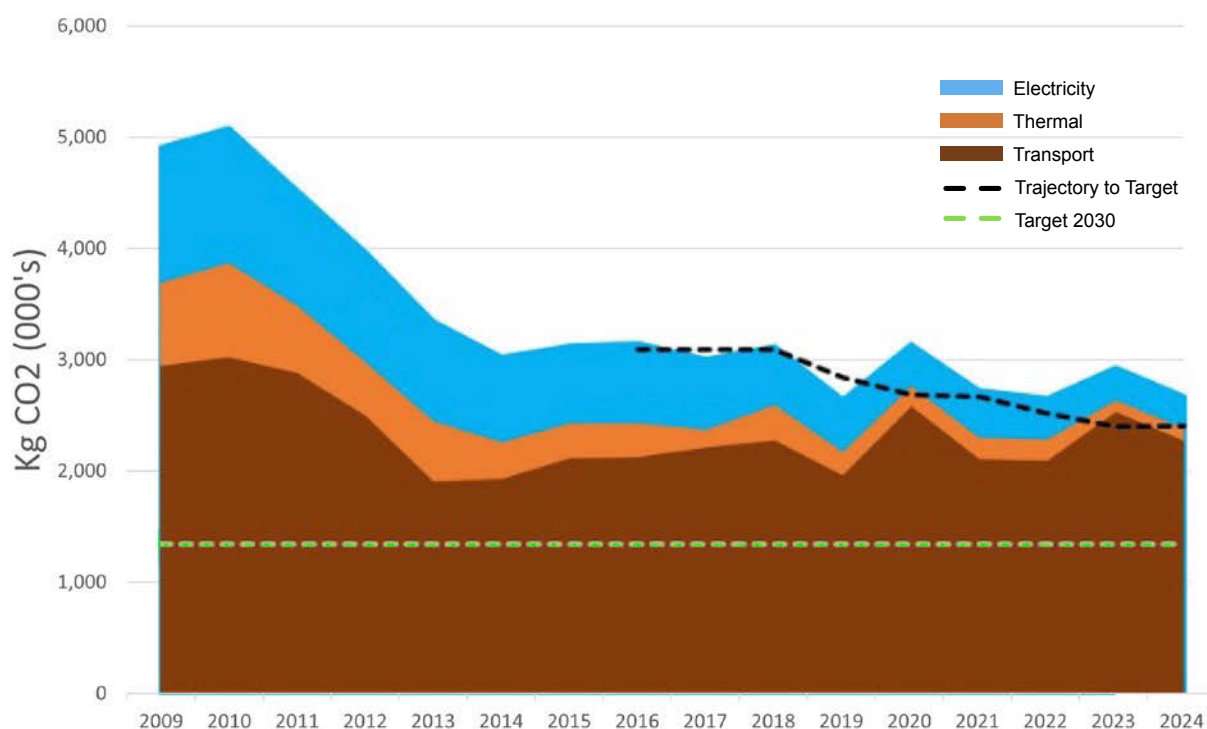
Reduce Green House Gas Emissions by 51% in 2030, from a baseline of Irish Lights emissions average of 2016-18.

Our Achievements to date

In Irish Lights, green house gas emissions from 2009 to 2023 have reduced from approx. 4,900T to 2,700T which has been a significant achievement. However, we face a considerable challenge in meeting the reduction in emissions target of a 51% by 2030 for two reasons;

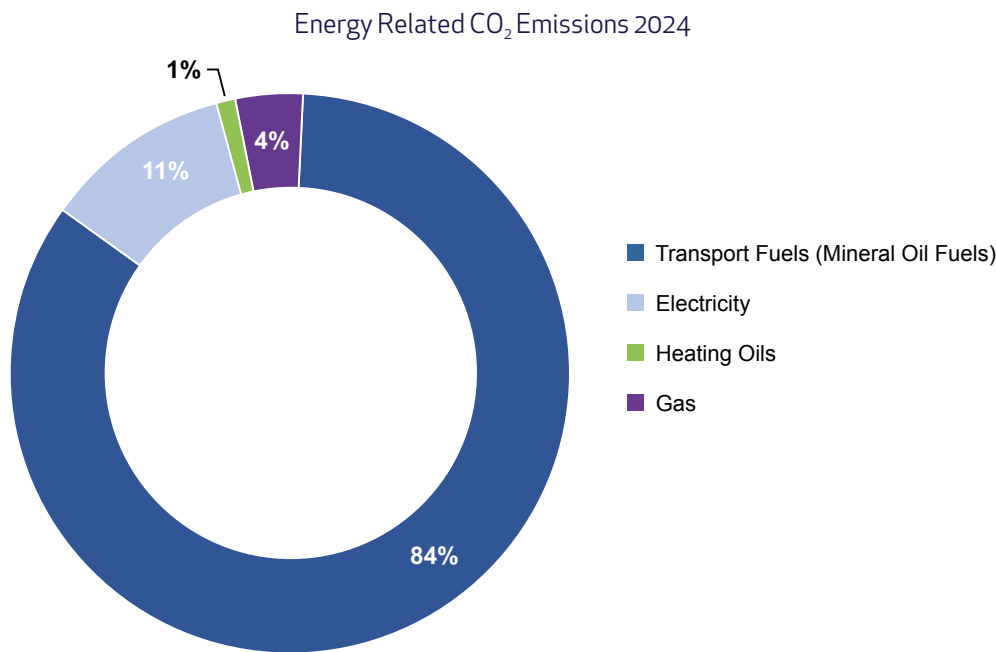
1. the baseline was set at the 2016-2018 average when we had already achieved significant reductions in emissions and
2. the majority of the reductions relate to transport emissions (the ship, ILV Granuaile) which is powered by Marine Gas Oil (MGO)

The graph below shows the reduction in CO₂ emissions by Irish Lights by emissions category across the period 2009 – 2024. The graph shows the large reductions in energy related emissions across all categories of transport, thermal and electricity.



The SEAI-generated chart below, based on data submitted by Irish Lights, shows a breakdown of the sources of emissions in 2024 and the following should be noted;

- According to Wind Energy Ireland, in 2024 wind farms provided 32% of Ireland's electricity. When added to solar generation, almost half (48.9%) of utility-scale electricity generation came from renewable sources.
- For the purposes of SEAI recording, diesel delivered to lighthouses is deemed to be thermal and therefore appears under 'Heating Oils'
- Transport fuels covers Granuaile, road transport in leased vehicles and aviation fuel



The **further reduction of Green House Gas Emissions** by 51% in 2030 from a baseline of Irish Lights emissions average of 2016-18 (which was 3,093,166 kgCO₂ to a target of 1,342,665 kgCO₂) will be a significant challenge. Irish Lights operates a multi-functional buoy tender vessel (ILV) Granuaile. The Granuaile is powered by Marine Gas Oil (MGO) and although her energy use and emissions are relatively low compared to similar sized and even larger vessels, due to her small engine size and moderate speed, the vessel is still responsible for approximately **84%** of all of our emissions.

kgCO ₂	Thermal Emissions	Transport Emissions	Electricity Emissions	Total Emissions
Baseline 2016-18 Average	261,885	2,205,296	625,985	3,093,166
2024 Actual	107,092	2,273,287	289,128	2,669,508
2030 Target				1,342,665



This graph, generated by SEAI Gap-to-Target tool (GTT) shows Irish Lights generated emissions by energy type: Thermal, Transport & Electricity.

The overall GHG emissions reduction target is -51% by 2030. However, this target is now split between 'Fossil CO₂' and 'Electricity CO₂'.

- Fossil CO₂ comprises thermal emissions and transport emissions. Thermal emissions are from using fossil fuels reported for thermal energy consumption, i.e. from using fossil fuels in buildings and equipment. Transport emissions are from using fossil fuels reported for thermal energy consumption, i.e. from using fossil fuels in vehicles, etc.
- Electricity CO₂ is from electricity use in buildings, vehicles, equipment, lighting etc.
– Total CO₂ = fossil CO₂ + electricity CO₂.

The target must be achieved by reducing fossil CO₂ emissions by 51% and by reducing Electricity CO₂ emissions at least in line with the supply network decarbonisation percentage.

The ships fuel consumption in 2024 was 760cu.m compared to 937cu.m in 2023.

GHG Emissions Reduction Plan to address gap to target

1. Electricity

In 2009, our energy baseline year, for each kWh of electricity generated in Ireland 0.555kg CO₂ was emitted. In 2024, that figure was 0.265kg CO₂ and it is estimated that in 2030 that figure will be 0.0972kg CO₂. This is what is meant by 'decarbonisation of the electricity supply network'. This decarbonisation will reduce Irish Lights Electricity CO₂ emissions annually.

2. Projects

A further reduction in emissions will come from our projects listed on page 16 including the solarisation of Kish and the Fastnet lighthouses.

3. The Ship

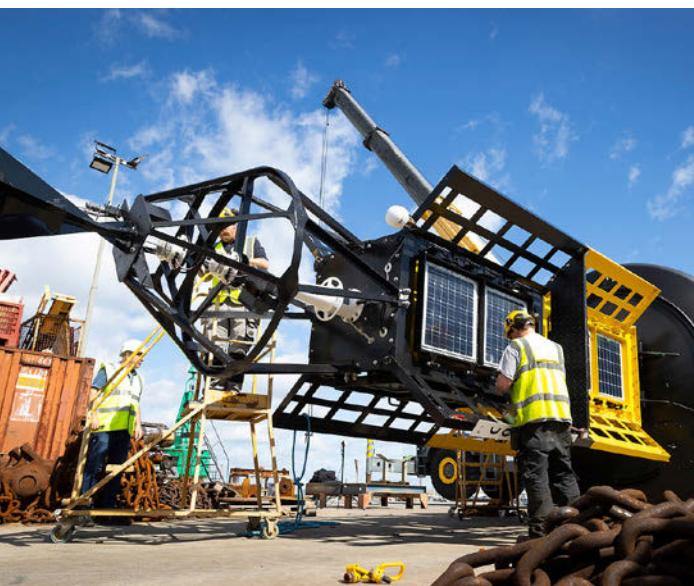
The Granuaile is responsible for 84% of all emissions. The ILV Granuaile was designed in 1999 and built in 2000. The vessel is now 25 years old and in comparison, to other vessels of its age and size, it was built to be more environmentally friendly by design.

Unlike most public sector organisations of similar size, Irish Lights requires the use of a specialised vessel to fulfil its statutory role. In order to lift and maintain large navigation buoys, a 20 Tonne crane is required, which must be housed on a vessel of sufficient size to operate in the harsh sea conditions around the Irish coast, during both summer and winter.

Sufficient vessel speed is required to respond quickly to wrecks or new dangers to navigation around the coast, particularly on the approaches to Tier 1 ports, which are Critical National Infrastructure due to the high percentages of goods transported by sea.

The current ILV Granuaile was designed in 1999 and built in 2000 to fulfil these functions and continues to provide an excellent service to the State. The ship remains compliant with all maritime emissions regulations from the International Maritime Organisation (IMO) and from Ireland, as the Flag State.

The relatively small size of the vessel, at 2,600 Tonne is below the 5,000 Tonne threshold for vessels to be included in the international and regional climate



action measures applicable to the maritime sector, such as the IMO Carbon Intensity Indicator (CII) or the EU ETS (Emissions Trading System) and FuelEU Maritime. The current engines, although now reaching end of life, use Low Sulphur Marine Gas Oil, producing emissions which are below the levels required by IMO regulations on NO_x (nitrogen oxides) and SO_x (sulphur oxides).

Nonetheless, when compared with other public sector organisations in Ireland who are not required to operate a ship, the inclusion of the vessel skews the overall Irish Lights figures as the ship accounts for 84 % of the organisation total emissions. Irish Lights is therefore committed to make every effort to reduce these emissions in line with the Climate Action Plan targets, with the main effort focused on the replacement of the ILV Granuaile which is now beyond its 25-year design life.

A project to replace the ship with a more environmentally friendly, modern design has commenced, but delivery of the new vessel is not expected until beyond 2030. The new vessel will be constructed to meet the IMO requirements for Energy Efficiency Design Index (EEDI). The design will also specify Tier III engines which use emission control technologies. It is also planned that these engines will be dual-fuel such that they will be capable of being run on fuels which produce less GHG emissions when these fuels become readily available.

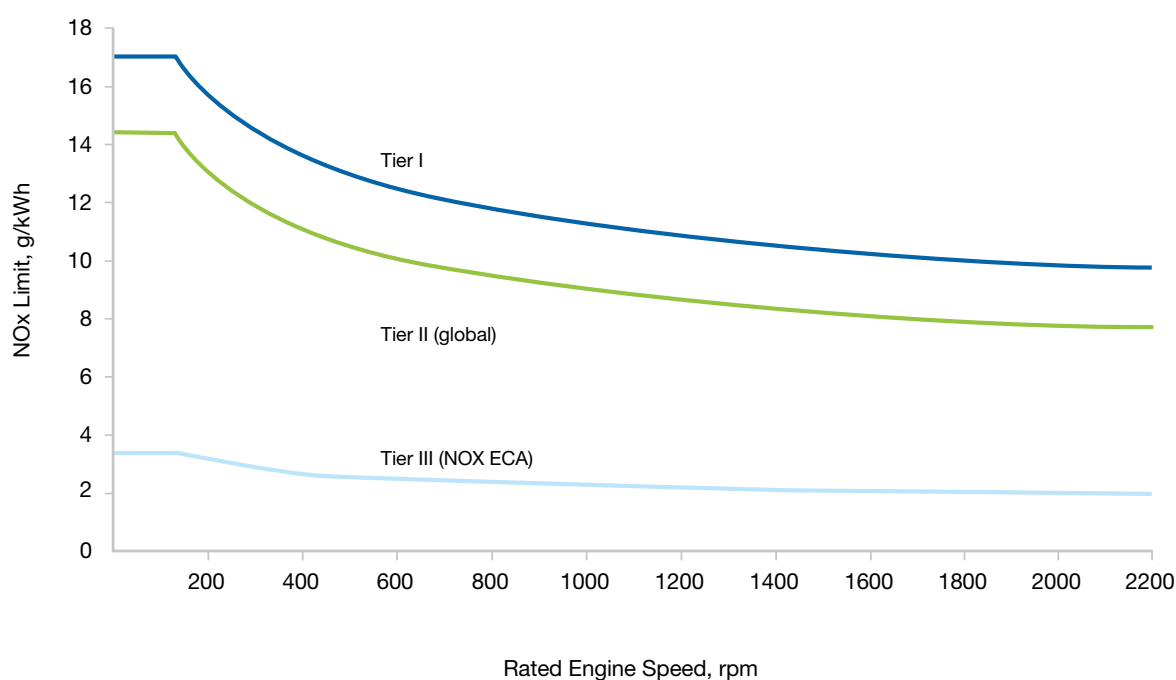




Photo: © Commissioners of Irish Lights

07

ENERGY AND ENVIRONMENTAL MANAGEMENT SYSTEMS

07. Energy and Environmental Management Systems

Governance and Environmental Management is central to the delivery of this Climate Action Plan.

Irish Lights will ensure that responsibility is delegated across all departments of the organisation and outcomes including targets are closely monitored, reported and audited. Our Sustainability Strategy makes clear that Senior Management are responsible to the Chief Executive and the Board for determining and delivering objectives and meeting targets. They will also have a role to ensure that climate action, including opportunities for engagement, mitigation and adaptation is integrated across other strategies and processes that can support implementation.

As outlined in Section 3, the Director for Coastal Operations (DCO) will be responsible for the implementation, monitoring and reporting on the Mandate. Each of the other 3 Directors will be responsible to the DCO for the implementation of actions within their departments. The DCO will be supported by the Energy Performance Officer.

Our ongoing monitoring and reporting will continue to be important in guiding decision-making. We also recognise that initiatives within Irish Lights will evolve and strengthen as we learn from research and technical advances, as climate policy requirements change and when we have developed capacity to go beyond targets. We will review, report on and, if necessary, revise this Climate Action Roadmap on an annual basis.

As part of the reporting Irish Lights has included a section on Sustainability in its Annual Report & Accounts which includes data in relation to GHG emissions and energy efficiency. Meeting targets along with associated savings and capital expenditure will be closely monitored.

Irish Lights is part of the SEAI Monitoring and Reporting system which assists in understanding energy consumption, helps to target areas for improvement, identifies opportunities, and monitors and benchmarks performance. Irish lights reports the following data through the M & R system:

- Annual energy consumption for all energy types
- Annual value in terms of activity metric
- Energy saving projects implemented and planned.
- Summary of the approach adopted for reviewing the organisation's energy management programme.

Our Energy Performance Officer (EPO) has attended the 3-day SEAI provided EnergyMAP course which is geared towards small and medium public sector bodies and gives a good understanding of the rationale behind the monitoring, reporting and the collection of data.

Data collection and Building Management is a key part of the management of energy use and our HVAC systems in our HQ Facility in Dun Laoghaire are controlled by a Building Management System (BMS). This system has been enhanced by the fitting of subsidiary meters on utilities to improve analysis of energy and resource consumption. 'Smart Meters' have been installed at many of our coastal sites as part of the nationwide roll-out. Irish lights has actively pursued ESB Networks to expedite the installation of meters to facilitate our monitoring and analysis of electricity consumption.



Photo: © Great Lighthouses of Ireland

08

GREENING OUR PROCUREMENT

08. Greening our procurement

Irish Lights is committed to environmental, economic and socially sustainable procurement.

Green procurement is part of the process of ensuring that these goals are achieved and of ensuring that Irish Lights' social, environmental and economic goals are promoted within the marketplace and to ensure that providers that foster and innovate to achieve these goals are rewarded for doing so.

Irish Lights' Green procurement policies are a framework for improving the organisations performance in three business areas, environmental, social and financial.

The Green Public Procurement (GPP) process requires the inclusion of clear and verifiable environmental criteria for products and services in the public procurement process and shall be guided by the newly issued Circular 17/2025.

Irish Lights will endeavour to:

- Only purchase goods and services that reflect best practice specifications or standards for environmental and economic or social sustainability.
- Evaluate the life-cycle costing (LCC) of products when procuring (energy efficient products may have a greater capital cost that is offset over time through reduced running cost).
- Avoid products that are harmful to the environment, specify goods, products and materials that cause the minimum harm to the environment including the impact of their manufacture, distribution, use & disposal.
- Consider circular economy principles when assessing requirements and developing specifications (redesign, reduce, reuse, repair, renovate, recycle and recover).
- Aim to promote environmental and social sustainability within all Irish Lights contract and tendering documentation and promote awareness within the organisation. Evaluate current products and practices in innovative ways. Invite ideas from across all levels and departments within the organisation and remain open to new ways of greening our products, practices, and habits.
- Continually review types of goods and services purchased and produce contract specifications and tenders that have the intention of decreasing the environmental impact and increasing positive impacts on society, economy and the producers while ensuring value for money.
- Make key suppliers aware of Irish Lights sustainability and Green procurement policies and communicate Irish Lights goals to the potential supply market throughout our market engagements.
- Where possible work with and inform key suppliers to improve their overall environmental and social performance and through our procurement exercises encourage suppliers to reduce the environmental impact of their products and processes and develop more environmentally and socially beneficial alternatives where possible. This will include promotion of the use of organic including a minimum of 10% by value of food sought, measuring and monitoring the food waste generated on premises from 2024, using a standardised approach to food waste.
- Including a requirement for cleaning tenderers to specify the training that will be put in place to ensure that all staff involved in delivery of the contract have the knowledge and skills to apply cleaning methods, which will reduce the environmental impact of the services.
- Continue to ensure that Irish Lights obtain best value for money.



Photo: © Commissioners of Irish Lights

09

IMPROVING OUR BUILDINGS AND VEHICLES

09.

Improving our buildings and vehicles

9.1 Dun Laoghaire Facility

Irish Lights is currently developing its building stock plan and will continue to increase energy efficiency in our buildings year on year. Our Head Quarter Building in Dún Laoghaire displays both Building Energy Rating (BER) and Display Energy Certificate (DEC) Certificates. The DEC is to be revised annually whereas the BER will be revised when we carry out improvements to our energy system.

In 2024, a pump replacement project was completed providing greater energy efficiency.

In 2023, we installed a 45.36 kWp solar array on the roof of our Engineering Workshop building. In 2024, the array generated 35.5MWh of electricity thus supplying 5.5% of our HQ's requirement.

The chillers in our Primary Data Centre were replaced in December 2024. We anticipate that this will result in a reduction in energy requirement of approx. 60,000kWh per annum.

In 2019 Irish Lights installed an electric car charger point at the Irish Lights head office in Dun Laoghaire. The charge point has a dual output, each capable of 22kW for 3 phase charging. It was installed in the Irish Lights carpark and is available to our employees. It is planned to install a second dual output charger in the coming year.

Heating & Cooling System

Heating in our Dun Laoghaire Head Quarters is provided by two natural gas boilers. Cooling is provided initially by the extraction of seawater from Dun Laoghaire Harbour but in the event that this is insufficient extra cooling is provided from an electrically powered chilled water system. When the gas boilers require replacement we will consider renewable technology including heat pumps.

9.2 Coastal Sites

Most of our coastal sites now exist solely for the provision of AtoNs and are uninhabited but have been developed as part of tourism and heritage initiatives. Irish Lights has worked with local communities to develop the lighthouses into visitor centres, lighthouse tours and visitor accommodation.

Great Lighthouses of Ireland **visitor attraction** partners include;

- Hook Head – Co. Wexford
- Youghal – Co. Cork
- Ballycotton Island – Co. Cork
- Fastnet Rock – Cape Clear Ferries
- Valentia Island – Co. Kerry
- Loop Head – Co. Clare
- Blacksod- Co. Mayo
- Fanad Head – Co. Donegal
- Rathlin Island – Northern Ireland
- The Great Light – Northern Ireland

We will work at ways to improve energy efficiency at all our sites including Lighthouses.

9.3 Vehicles

The Irish Lights fleet currently comprises the following vehicles:

- 90T Grove Mobile crane (Diesel)
- Merlo Teleporter (Diesel)
- Jungheinrich Fork Balance Truck (Electric)
- Linde Stores Reach Truck (Electric)
- Jungheinrich Pallet Truck (Electric)
- Kia Sportage (Hybrid)
- Citroen Dispatch Van (Diesel)
- Harris Maxus (Diesel)

Irish Lights will continue to examine the use of zero emissions vehicles where operationally feasible and practical going forward. The business case will examine such areas such as capacity, consumption, emissions along with practicalities given the geographical location of our assets.

9.4 Bicycles

A bicycle shelter for the use of employees and visitors was erected during the redevelopment of the Irish Lights site in Dun Laoghaire in 2006-08. In 2021, a second bicycle shelter was erected in a more prominent position at the front of our car park providing a more accessible, protected and secure location.

Changing, showering and clothes drying facilities are available in our Facility for all employees.



10

REDUCING RESOURCE USE

10.

Reducing Resource Use

10.1 Paper

In 2012, Irish Lights reviewed all paper-based processes and digitised where appropriate.

Irish Lights is carrying out a review of the remaining paper-based processes. Technological and systems improvements in the past 10 years may now provide further opportunities to reduce paper usage.

Measurement and monitoring of paper consumption against a baseline and targets will be carried out.

10.2 Water

We have fitted subsidiary water meters in the building to identify water usage.

We are investigating the feasibility of gathering rainwater from the flat roof of our Engineering Workshop building in Dun Laoghaire to provide water for our buoy washing operation.

10.3 Wood

We use relatively small quantities of wood. All wood which we use is sourced from forests which are maintained sustainably. All wood is either Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) certified.

10.4 Waste

We are engaging with our waste management company to increase the segregation of our waste streams in order to improve our recycle rate. We will carry out awareness campaigns and set targets to significantly reduce all our waste streams.

Measure to monitor the food waste generated on premises from 2024, using a standardised approach to food waste measurement set out in the EPA public sector guidance will be introduced under any new contract.

All new contract arrangements related to canteen or food services, including events and conferences, to include measures that are targeted at addressing food waste

10.5 Project Design

Irish Lights future design philosophy will consider whole life costs and ensure any materials used can be recycled or sustainably disposed of at end of life.

10.6 Single use

Irish Lights in 2024 ceased using disposable cups in our canteen. They were replaced by a branded Irish Lights sustainable mug, designed and launched by the Green Team.



11

OUR WIDER CLIMATE ACTION PLANS

11.

Our wider climate action plans

Irish Lights has a new Sustainability Strategy and Action Plan to enable and demonstrate its commitment to meeting the objectives of the Government's Climate Action Plan.

In addition to the climate actions outlined in this climate action roadmap, the plan also outlines our wider sustainability actions plans to include the following;

- Identifying and controlling discharges & emissions to water and air.
- Effective noise management and control including noise mitigation where practicable.
- Enhancing and protecting biodiversity in and around our assets/properties.
- Contributing to Sustainable Maritime Communities by working in partnerships with others to protect and sustainably develop the heritage of Irish Lights.
- Promoting health, wellbeing, diversity, and inclusion.



Commissioners of
IRISH LIGHTS

*Navigation
and Maritime
Services*

Commissioners of Irish Lights
Harbour Road
Dun Laoghaire
Co. Dublin
Ireland

P +353 1 271 5400
F +353 1 271 5566

E info@irishlights.ie
W irishlights.ie



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If you notice any aid to navigation is not functioning correctly please contact our 24 hour emergency number **01 280 1996**