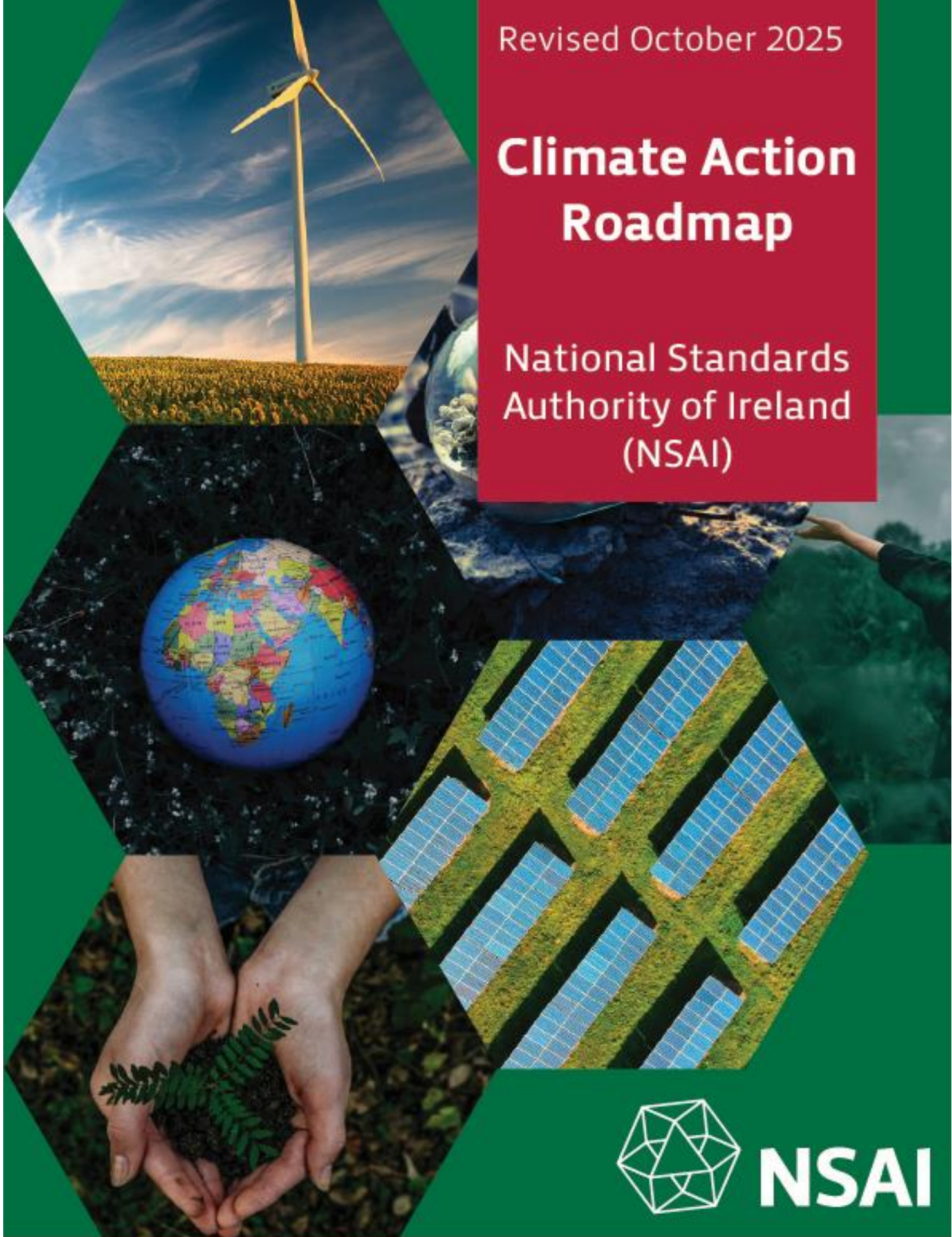




Revised October 2025

Climate Action Roadmap

National Standards
Authority of Ireland
(NSAI)



NSAI

Innovating to shape a safer, better and sustainable future

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Iteration 2.0, approved 14.10.2025.

1. Context and Introduction

1.1 The National Standards Authority of Ireland (NSAI) – context for this Climate Action Roadmap and organisational profile

Public sector bodies are required to put in place a Climate Action Roadmap to reduce greenhouse gas emissions (GHG) emissions by 51% by 2030 and increase the improvement in energy efficiency from the 33% target in 2020 to 50% by 2030.

Moreover, it is NSAI's objective to support businesses in Ireland on their climate action, de-carbonisation and sustainability journeys.

The NSAI is Ireland's official standards body. NSAI improves the performance of Irish business and protects consumers through the setting of standards and issuing of certification in the quality and safety of goods and services. NSAI's role is rooted in providing a 'quality infrastructure' for business and trade in Ireland. This includes a market surveillance role for a reliable system of weights and measurements in the state.

NSAI is a business support agency under the remit of the government Department of Enterprise, Tourism and Employment. NSAI aims to inspire consumer confidence and create the infrastructure for products and services to be recognised and relied upon, all over the world. NSAI has four main divisions: Standards, Certification, Legal Metrology Services and the National Metrology Laboratory, which carry out functions that underpin trade and business. Each of these divisions carry out work with elements of climate action and sustainability.



The NSAI Strategic Plan 2022-2026, sets out our commitment to contribute to, and take a leadership role in core national policies such as climate action. NSAI will provide critical support to the public and private sector to achieve sustainable development goals.

Within the NSAI's Strategic Plan 2022-2026, climate action and sustainability form a key focus within Goal 2 which set outs the NSAI's commitment to innovatively create new service lines to embrace change.

Strategic Project 3 'Climate Action and Sustainability' under the NSAI's Strategic Plan 2022-2026 sets out NSAI's commitment to structuring its services to support the Green Transition, provide an infrastructure to support that transition, and establish NSAI as an exemplar organisation in terms of internal environmental targets (Figure 2 below).

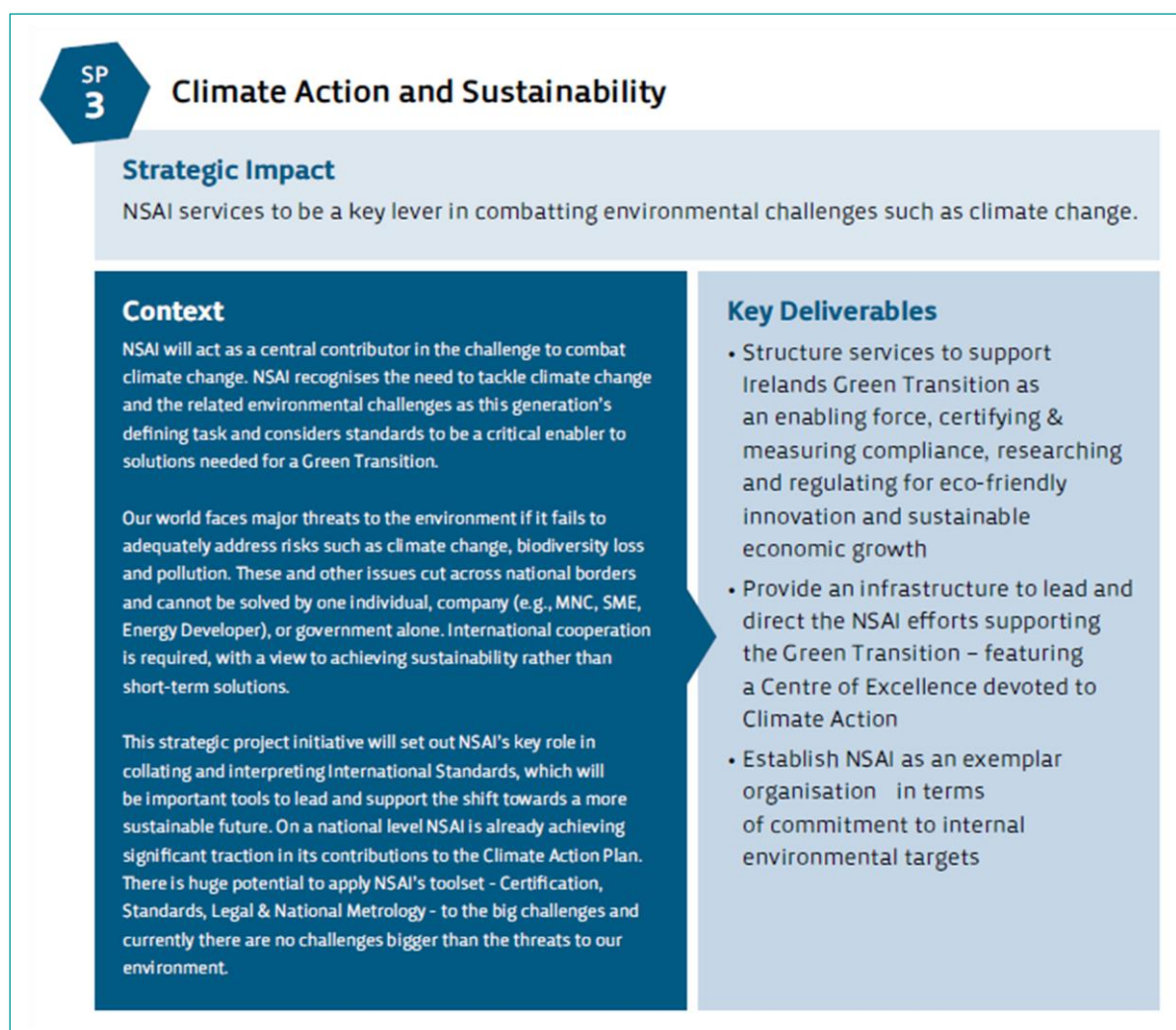


Figure 2: Strategic Project 3 covering Climate Action and Sustainability

It is NSAI's objective to be a climate action and sustainability exemplar:

internally – in how it does business; and

externally – in how it underpins and supports trade and business.

1.2 The Government of Ireland's Climate Action Commitments and NSAI's role

The Government's Climate Action Plan and the Climate Action and Low Carbon Development (Amendment) Act 2021 are aligned with the European Green Deal, which

sets out European Commission policy initiatives with the overarching aim of making the European Union (EU) climate neutral by 2050. The Climate Action and Low Carbon Development (Amendment) Act 2021 sets Ireland on a legally binding path to net-zero emissions by 2050. NSAI is among Ireland's government agencies with responsibility for supporting the Act through the development of standards across a range of related subject areas.

Harnessing the power of standards, NSAI is committed to supporting and facilitating stakeholders in setting the tone for how green measures, such as home retro-fitting, energy innovation and the circular economy can be utilised in Ireland. The Authority, in partnership with policymakers, researchers, and industry professionals, continues to identify new areas in which to utilise standardisation initiatives in response to the global climate imperative.

1.3 NSAI Climate Action Roadmap

The Climate Action Plan sets out the energy efficiency and energy-related greenhouse gas (GHG) emissions reduction targets which public sector bodies in Ireland are legally obliged to meet, and mandates the National Standards Authority of Ireland (NSAI) as a public body to develop a roadmap setting out how it will deliver these targets.

The NSAI Climate Action Roadmap has been developed by the NSAI initially in response to this obligation, but moreover, to strive to be an action plan for its climate action and sustainability ambitions, including under-pinning trade and supporting businesses on their own sustainability journeys. It outlines the work undertaken by the NSAI to date and our approach to continuing to reduce carbon emissions and energy usage from our buildings, as a result of our operations and activities. This Climate Action Roadmap has been written to demonstrate how the NSAI will meet the requirements of the Public Sector Climate Action Mandate (the Mandate) and reach its 2030 carbon and energy efficiency targets through reducing carbon emissions and energy consumption from our buildings and operations.

The Climate Action Plan envisages the public sector leading by example on climate action to reach the target of reducing Ireland's greenhouse gas emissions by 51% by 2030 and becoming climate neutral no later than 2050. Climate action should be embedded into how each public body plans, organises and mobilises to deliver its functions and services.

This NSAI Climate Action Roadmap is a framework 'living document' and will continue to be developed on an ongoing basis.

1.4 United Nations Sustainable Development Goals

The NSAI is committed to supporting the Government and businesses align with and deliver on the ambitions of the United Nations Sustainable Development Goals (UN SDGs). The NSAI is in the process of focusing on a number of priority UN SDGs, whilst being supportive of all of them. The NSAI has developed a draft policy on support for the UN SDGs in its activities.



Figure 3: The United Nations Sustainable Development Goals (UN SDGs)

2. Our People – Leadership and Governance, Engaging Our Staff

This Climate Action Roadmap builds upon several work-streams and initiatives progressed by the NSAI with the objective of reducing resource use, enabling behavioural change, and achieving certification on complementary energy and environmental standards.

Actions initiated and implemented to date include:

1. The NSAI's CEO and board have committed to the NSAI's role in supporting government's implementation of the climate action plan, through the NSAI Strategic Plan 2022-26.
2. Defined sustainability and energy usage reduction as being a key deliverable as part of the NSAI's Strategic Plan 2022-2026.
3. NSAI has nominated Mr Enda McDonnell, its Director of Standards, as its Climate and Sustainability Champion.
4. NSAI has also nominated an Energy Performance Officer (Mr Frank Collins).
5. Appointed a dedicated Facilities and Sustainability Officer to drive and support sustainability and carbon reduction initiatives across the organisation (Ms Wendy Nolan).
6. Established a Green Team, under our Strategic Project 3.3, with members representing all departments across the organisation with the objective of supporting targets through staff engagement, information-sharing and behavioural change. Strategic Project 3.3, focused on the Green Team, is designed to become an integrated driver of sustainability. Green Team activities and achievements to date are dispersed throughout this document, including commencement of engagement with My Green Labs.
7. Enrolled for participation in a sustainability certification programme for laboratories at the National Metrology Laboratory (NML), resulting in My Green Lab certification (valid until 2025). NML will work to maintain its My Green Lab certification as part of its commitment to sustainability.
8. Engaged with the SEAI Public Sector Partnership Programme.

9. Began development in 2022-23 of a Climate Action and Sustainability Centre of Excellence to embed and drive climate action across the organisation through the engagement and involvement of all NSAI teams, and in the service provision to business. In 2023, appointed the first personnel to lead the establishment of the NSAI's Climate Action and Sustainability Centre of Excellence (Pádraic Ó hUiginn appointed as Lead).
10. NSAI will, led by its Climate Action and Sustainability Centre of Excellence and in collaboration with other functions of the organisation, develop climate action and sustainability workshops and identify senior leadership training opportunities. Our Climate Action and Sustainability Centre of Excellence Lead, in collaboration with our Quality Assurance and Risk Officer identified senior leadership training opportunities for board members, delivered by year end 2024. Additionally, a strategy day was organised for board members, management board members and other management team members in August 2024, with workshops with leading experts on climate action, sustainability, circular economy, and environmental, social and governance (ESG) foresight and leadership.
11. Given the international aspects of its role in supporting Irish business, NSAI must use air travel to meet some of its commitments worldwide. NSAI uses hybrid meetings and audits where possible to reduce its air travel footprint in fulfilling its international role. Since 2020, NSAI off-sets its official air travel emissions for NSAI Ireland and UK through a carbon tax-linked payment to the statutory Climate Action Fund each year.
NSAI monitors the kilometres associated with official air travel usage, in line with the provisions of Circular 01/2020 issued by the Department of Public Expenditure, National Development Plan Delivery and Reform in January 2020. Moreover, NSAI makes a payment to the Fund Manager of the statutory Climate Action Fund related to those emissions for the previous year:
 - for 2024, NSAI's year-end carbon emissions liability for official air travel was €3,245.24;
 - for 2023, NSAI's year-end carbon emissions liability for official air travel was €2,490.09;
 - for 2022, NSAI's year-end carbon emissions liability for official air travel was €1,171.21;
 - for 2021, NSAI's year-end carbon emissions liability for official air travel was €51.79, reflecting the level of public health restrictions in place due to the global COVID-19 pandemic during that time; and
 - for 2020, NSAI's year-end carbon emissions liability for official air travel was €456.90, reflecting the spread of the COVID-19 pandemic in the first quarter of that year.

3. Our Targets

This Climate Action Roadmap focuses on meeting or going beyond the requirements of the Public Sector Climate Action Mandate 2024 and 2025 editions.

NSAI's core climate action targets are:

1. Reduce GHG emissions by 51% in 2030.
2. Increase the improvement in energy efficiency (as part of the public sector) from the 33% target in 2020 to 50% by 2030.
3. Update this climate action roadmap annually in line with the updated Public Sector Climate Action Mandate.

4. The Journey to Our Targets

4.1 Highlights

Some highlights of key actions initiated by NSAI on its journey to the 2030 and 2050 targets include:

1. Monitored energy usage data and defined significant energy users (SEUs) that account for over 80% of the carbon emissions across the built environment.
2. Completed several energy reduction projects across the estate, including lighting upgrades, BMS upgrades and boiler replacements.
3. Participated in an I.S. EN ISO 50001:2018 accelerator programme, supported by the SEAI with an objective to achieve certification by Q1 2024. A stage 2 audit was completed very early in Q3 2024, with formal written notification of certification issuing to NSAI in November 2024. NSAI will maintain I.S. EN ISO 50001:2018 Energy management system certification.

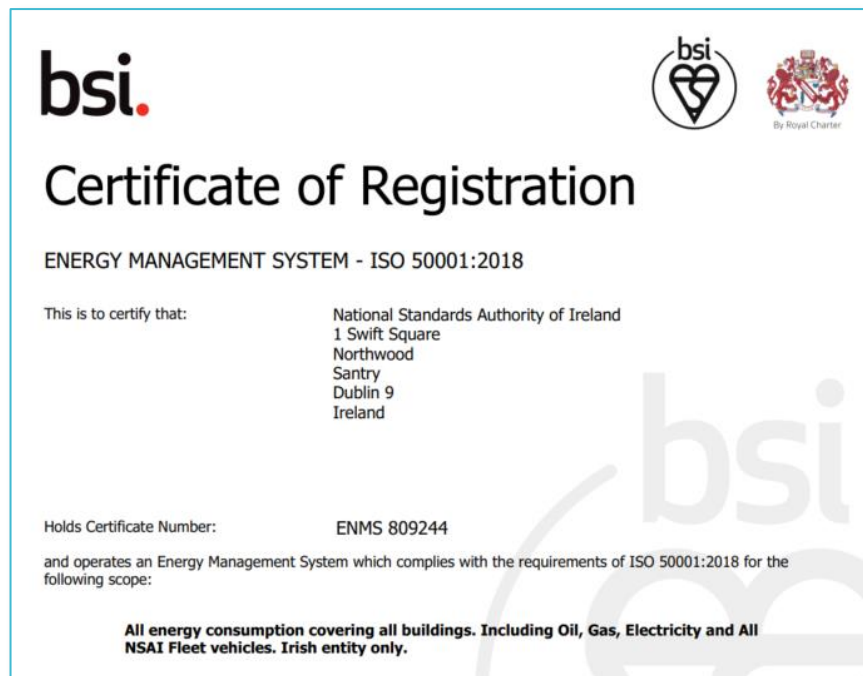


Figure 4: Extract from Energy Management System ISO 50001:2018 Certificate dated 20.11.2024

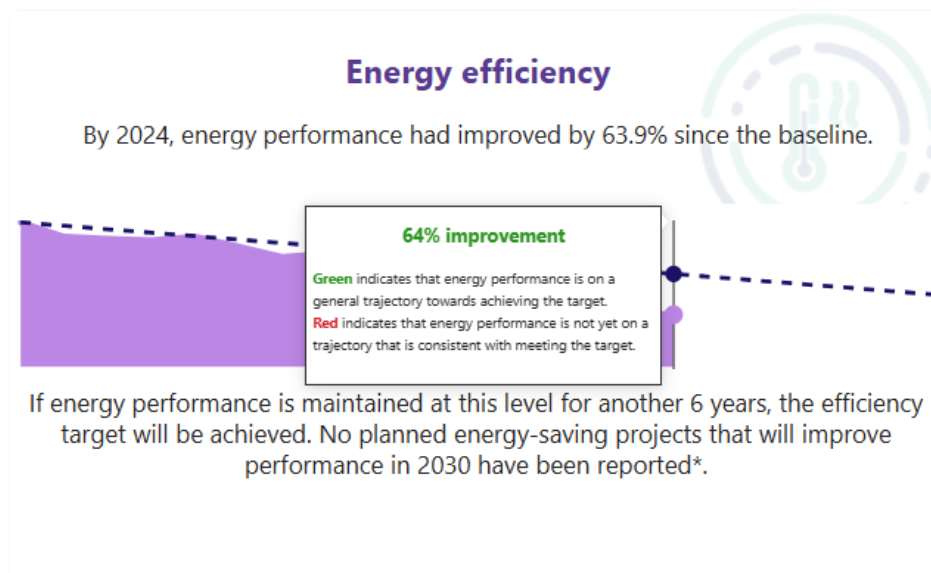
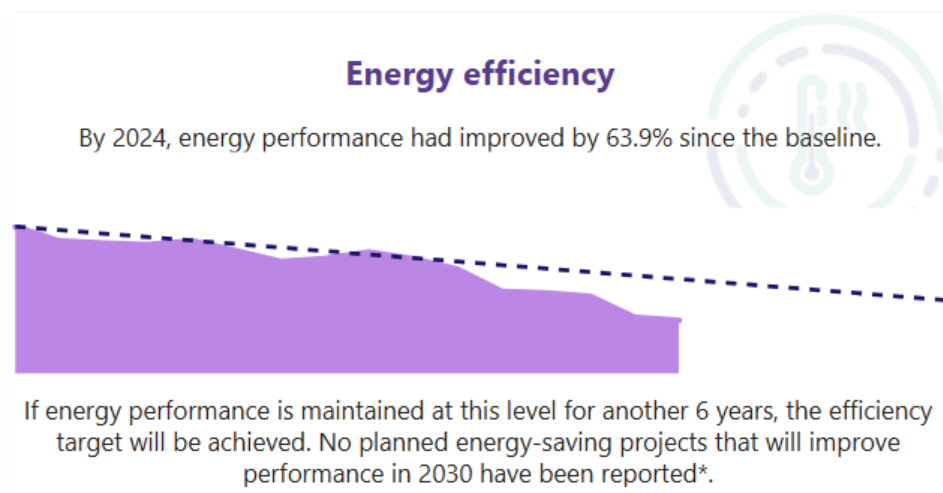
4. NSAI upgraded the building management system in the National Metrology Lab.
5. NSAI has installed solar photovoltaic (PV) panels at the Limerick and Galway regional offices, with the objective of reducing reliance on fossil fuels and moreover, sending any surplus electricity generated to the national grid.

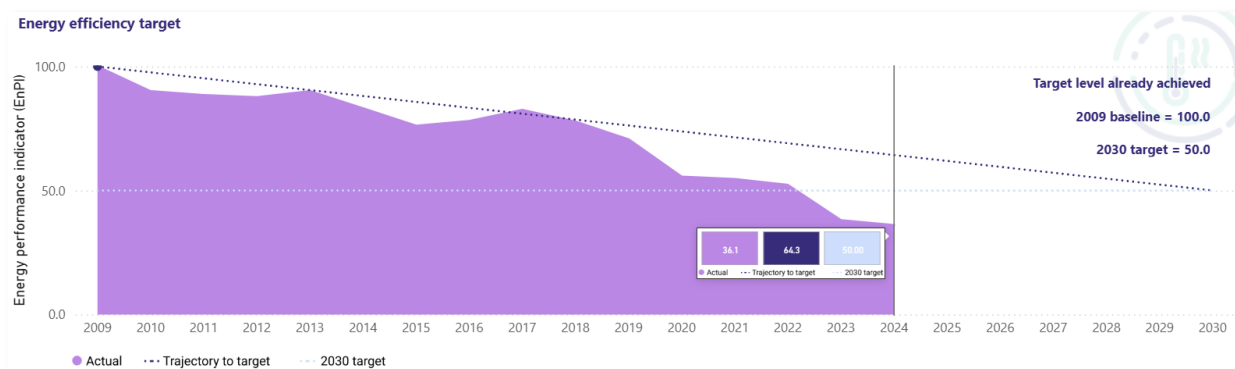
4.2 Background and context

The Climate Action Plan 2021 was preceded by the National Energy Efficiency Action Plan which set out an energy reduction performance target of 33% for the Public Sector by 2020, against a 2009 baseline year.

To support this, all public sector bodies have been required to report and track progress on energy reduction to the Sustainable Energy Authority of Ireland in accordance with S.I. 426/2014 (and S.I. 542/2009).

In comparison, by the end of 2022, NSAI had reduced its total consumption (non-adjusted) by 49.9%, as against the 2009 baseline; and subsequently, by 62% in 2023 and by 64% at the end of 2024.





Figures 5a, 5b and 5c: Energy Performance Indicators (Baseline 2009 to 2024) – Source: SEAI M&R

4.3 Our progress to date on our 2030 emissions (carbon) and energy efficiency targets

For the purposes of the Public Sector Mandate, greenhouse gas emissions are taken to be energy-related carbon dioxide equivalent emissions. NSAI's baseline energy-related carbon dioxide emissions for 2016-2018 were 786,742.5 kgCO₂, with a provisional gap to target at the end of 2023 of 89,908kg CO₂. This gap to target does not take into consideration supply side reductions as a result of 'greening' of the electricity grid. Taking into account grid/supply side de-carbonisation out to 2030, the gap to target for 2030 is 0kg CO₂ at year end 2024.

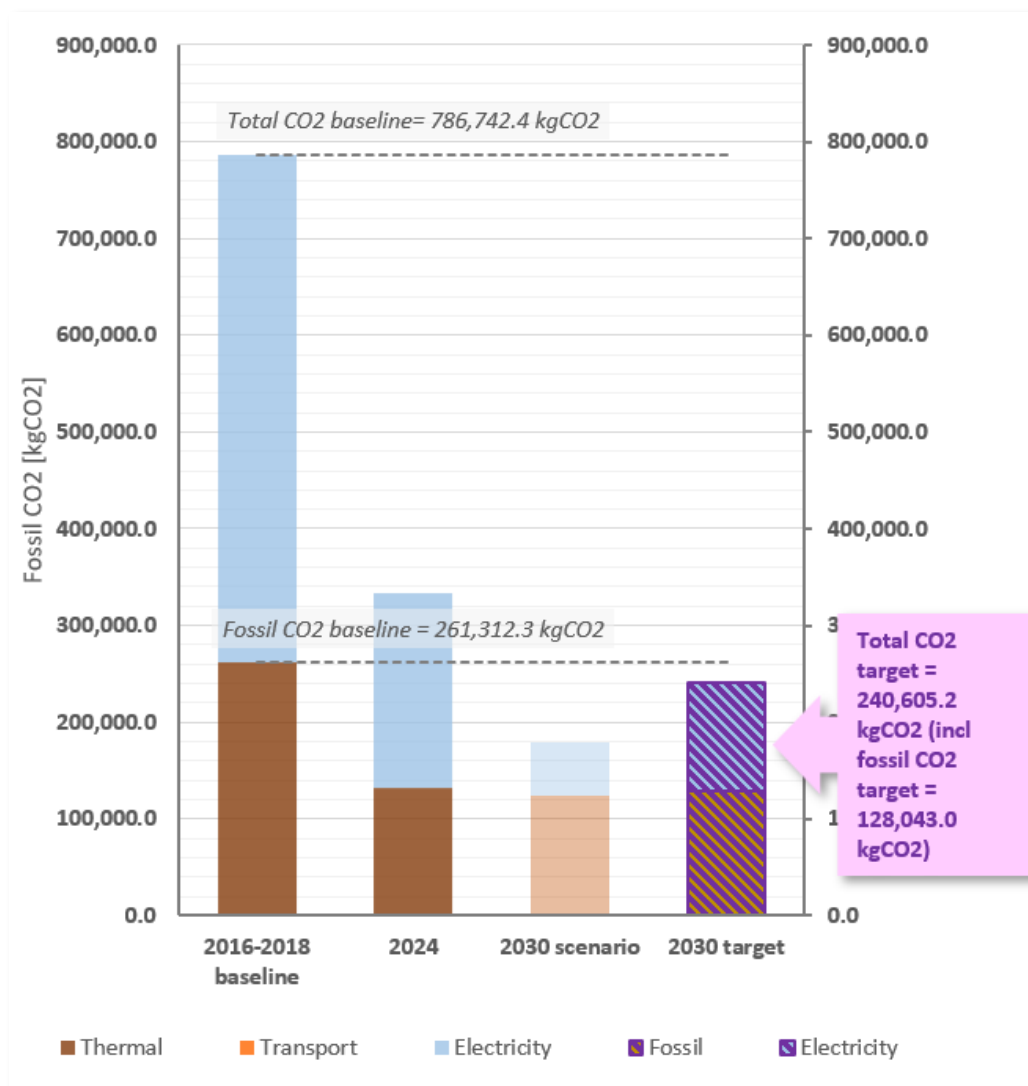


Figure - 6: NSAI Total GHGs emissions Gap-to-Target (Baseline 2016 – 2018) – Source: SEAI M&R and NSAI

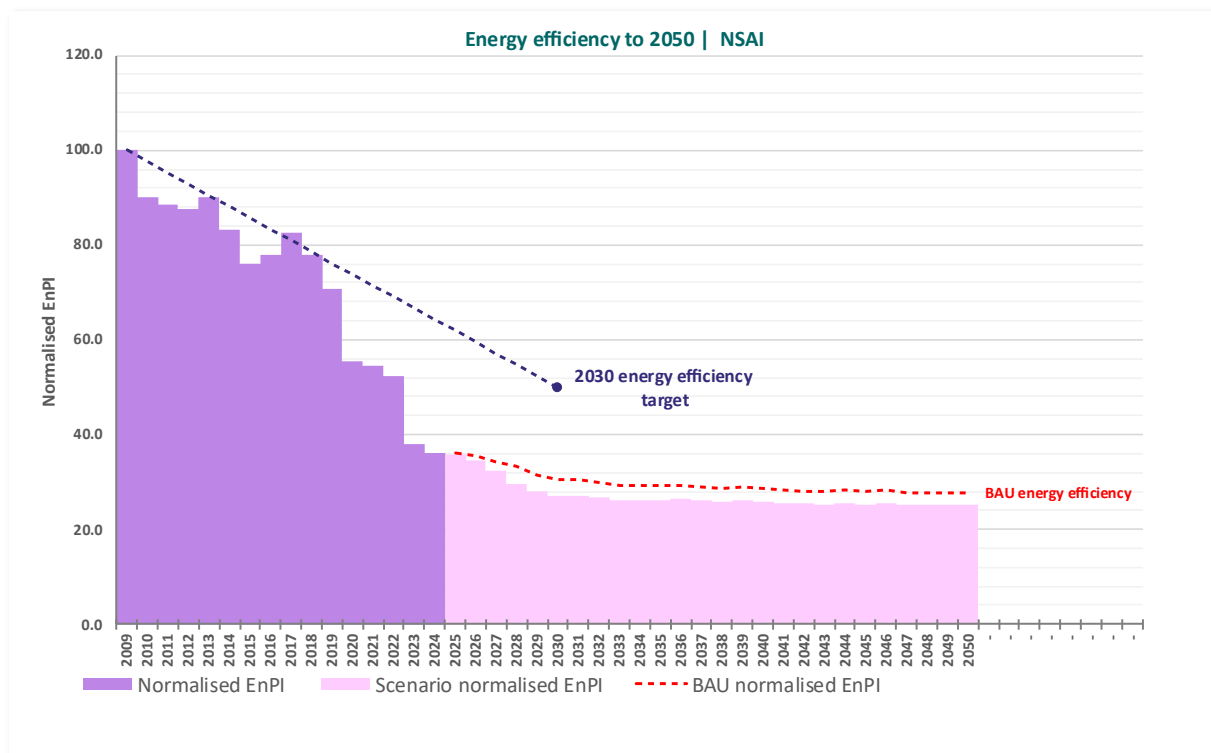


Figure 7: NSAI improvements in energy efficiency since baseline 2009 shown using normalised Energy Performance Indicator (EnPI), and impact when project pipeline is included Source: SEAI M&R and NSAI

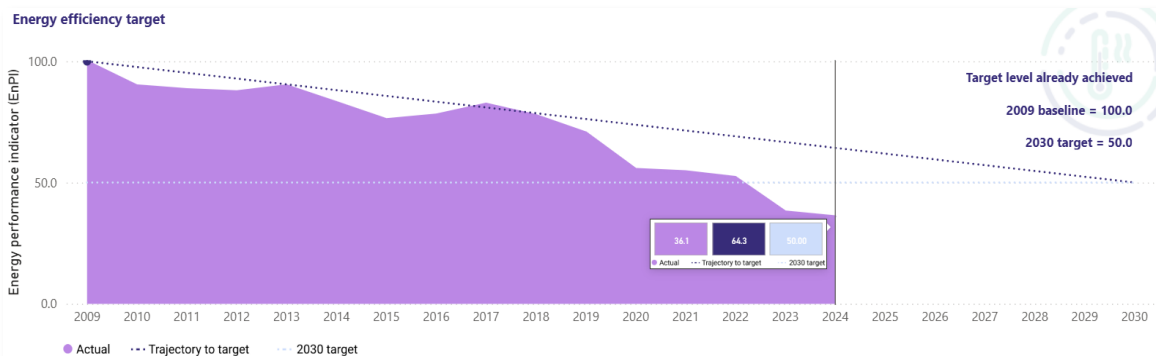
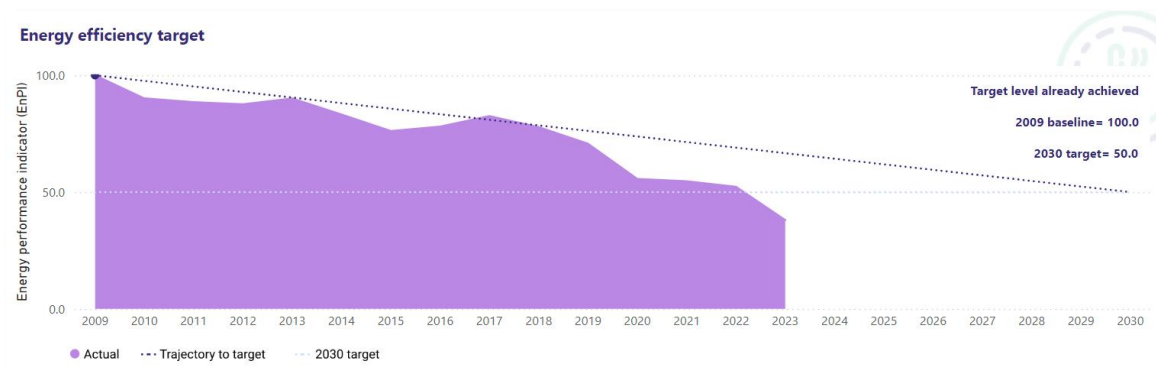
Figure 7 above using the normalised EnPI model illustrates that by the end of 2022, NSAI came very close to reaching its 2030 energy efficiency target, that of a reduction of 50%. From the 2009 baseline normalised EnPI of 100, NSAI reached a normalised EnPI of 50.1 at the end of 2022 and 36.1% at year end 2024.

4.4 Our progress to 2030 targets

NSAI's composite table below (Table 1) shows that NSAI's gap to target on total carbon emissions by 2030, when 'greening of the grid' is included is 0kg CO₂. Table 1 also shows that based on provisional year ending 2024 figures, NSAI has reached its 2030 energy efficiency target, that of a 50% reduction.

Energy-related carbon emissions reduction target (51% reduction by 2030)	2016-2018 baseline	2030 Total in-target emissions	2024 Total (unadjusted)	Gap to Target (incl. 'greening' of grid to 2030)
Total GHGs (kg CO ₂)	786,742	240,605	332,073.0	0.0
% Reduction vs. baseline	-	69.4	57.8	0.0
Energy efficiency target (50% reduction in consumption by 2030)	2009 baseline - normalised Energy Performance Indicator (EnPI)	2030 Target	2024 Total	Gap to Target (Using normalised EnPI)
	100	50	36.1	0.0

Table 1 – Our progress to 2030 targets (end-2024): energy-related carbon emissions and energy efficiency targets progress to 2030 Source: NSAI Climate Action & Sustainability Centre of Excellence based on finalised SEAI M&R and NSAI data



Figures 8a and 8b: 2024 analysis shows NSAI already achieved its energy efficiency target as of year-end 2023 and remained on target in 2024 Source: SEAI M&R 2030 and NSAI (finalised SEAI data)



Figure 9 – 2024 analysis shows NSAI already achieved its fossil CO₂ target as of year-end 2023, with total CO₂ emissions requiring further reduction (de-carbonisation of electricity grid out to 2030 will be a supporting factor here) Source: SEAI M&R 2030 and NSAI (finalised SEAI data)



Figure 10 - 2025 analysis shows NSAI stayed on track for its fossil CO₂ target as of year-end 2024, with total CO₂ emissions requiring further reduction (de-carbonisation of electricity grid out to 2030 will be a supporting factor here) Source: SEAI M&R 2030 and NSAI (finalised SEAI data)

To achieve 'deeper' de-carbonisation and greater energy efficiency beyond the business as usual trajectory, NSAI is in the process of a number of initiatives, including for example the installation of solar panels across a number of its sites, which opens up the potential to be a net exporter of renewable electricity to the grid at those locations.

NSAI has installed solar PV panels at the Limerick Regional Office and at Galway Regional Office, with NML planned, and two other buildings under consideration.

Since the NML boiler and Building Management System (BMS) have been upgraded, the subsequent upgrade of the NML chiller system is expected to reduce NSAI's carbon emissions and energy consumption over time.

The difference between business as usual and the improvements NSAI has included in its proposed de-carbonisation and energy efficiency projects beyond 2025 is captured in the graph at Figure 11 below. Figure 11 shows NSAI's decarbonisation gap to target when its projects pipeline beyond 2025 is factored in.

Amongst 2026 to 2027 energy efficiency pipeline projects or 'opportunities' envisaged for NSAI are a heat pump at Limerick Regional Office and solar PV panels at the NML.

As we near target year 2030 and look beyond that horizon to the deeper de-carbonisation required out to 2050 by the European Union and the Government of Ireland's Climate Action Plans, it is becoming starkly clear that these mandates will require significant additional capital investment from the exchequer to comply—particularly for the improvement of buildings and heating and cooling systems.

2030 total CO2 target | modelled scenario

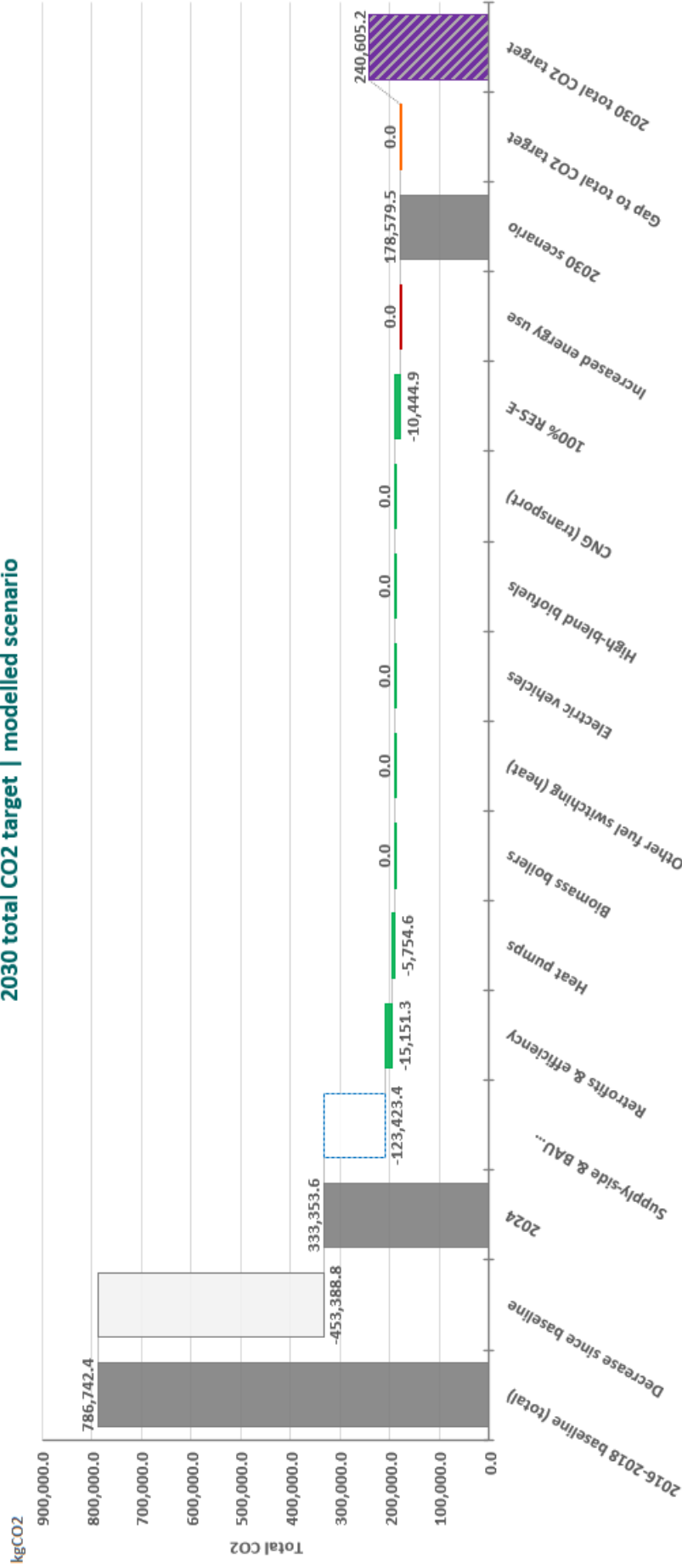


Figure 11: Impact of NSAI's projects pipeline of de-carbonisation initiatives on total emissions beyond 2024 (Baseline 2016 – 2018)

4.5 Energy and Environmental Management Systems

NSAI is a participant in the SEAI Accelerator programme to I.S. EN ISO 50001:2018.

NSAI implemented an I.S. EN ISO 50001:2018 accredited Energy Management System (EnMS) in 2024, with certification having issued in November 2024. NSAI upgraded the building management system in the National Metrology Lab.

It is NSAI's intention to implement an ISO 14001:2015 Environmental Management System (EMS) in the medium-term, when practicable and allowing for budgets.

5. Greening Our Procurement

NSAI is committed to greening its public procurement across all aspects of the organisation and will develop this aspect of its Climate Action Roadmap further.

Some of NSAI's procurement is tied into panel arrangements in place for a number of public bodies collectively, which reflect existing green public sector procurement requirements.

In its initial Climate Action Roadmap, NSAI committed to including sustainability as one of its criteria in its public procurement competitions. NSAI now allocates a scoring for a sustainability criterion.

At its head office in Santry, NSAI has contracted a restaurant operator with a commitment to sustainability, including sourcing its food produce as locally as possible and ceasing the use of single-use plastic cups and single-use coffee cups.

In the area of plastics, NSAI will examine the use of plastic materials across the organisation.

This commitment aligns with UN SDG 12 Responsible Consumption and Production.

6. Improving Our Buildings and Vehicles – Achieving Deeper De-carbonisation

6.1 Buildings

NSAI manages nine buildings including a head office, the National Metrology Lab (NML) and regional offices amongst them. NSAI shares a heating system in its head office in Santry, Dublin. The heating system in the NML has been replaced with a newer, more efficient system.

NSAI occupies premises at a number of locations. The head office is located at 1 Swift Square, Santry, Dublin 9, in a shared, leased premises.

The NSAI has a number of Regional Centres located at Cork, Dublin, Dundalk, Galway, Limerick, Sligo and Waterford. The NML is located at Glasnevin, Dublin 9. All of these premises are owned by NSAI.

NSAI has placed a Display Energy Certificate (DEC) in every building 'frequently visited by the public'.



Figure 12: An example of a Display Energy Certificate (DEC), as displayed in the public foyer of NSAI headquarters, Santry, Dublin

The US subsidiary office is located at 20 Trafalgar Square, Nashua, NH 03063, USA; these premises are leased. The UK subsidiary office is located at 6-9 The Square, Stockley Park, Heathrow, UB11 1FW, UK, on a short-term rental agreement.

NSAI has replaced heating boilers in the NML with more modern and efficient replacements, which has contributed to reducing our energy usage there. NSAI replaced the cooling system in the NML during 2023-24, with a newer, more energy efficient system.

The NML has achieved My Green Lab certification in 2023 and will also look to seek I.S. EN ISO 14001 certification (environmental management).

The NML will undertake a building survey with a view to improving the energy efficiency of the building. This survey will include review of insulation (external walls and roofing), windows, efficiency of radiators and efficiency of the various pumps and motors that are installed in NML's plant.

NSAI is examining its buildings (mainly administrative office buildings, other than those at Glasnevin and Poppintree), for opportunities to install solar photovoltaic (PV) panels. Solar PV panels have been installed in the Limerick and Galway Regional Offices, with a view to reducing the use of fossil fuel there, and moreover, supplying surplus renewable electricity into the grid.

NSAI has begun planning for the creation of bicycle-friendly buildings for employees and visitors, including by putting bicycle parking in place, with for example, secure, sheltered parking available at its head office in Santry.

Approval was granted for EV charging-points installation, with installations completed in Limerick and Galway Regional Offices, and in quarter 4 2024 at NSAI headquarters in Swift Square, Santry.



Figure 13: Electric vehicle charging unit installed at Galway Regional Office

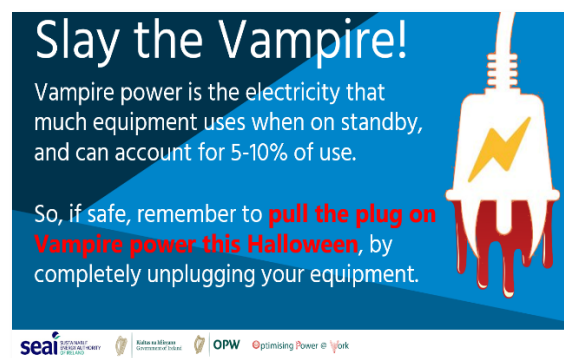


Figure 14: Electric vehicle charging unit installed at NSAI headquarters, Santry, Dublin



Figures 15a and 15b: Solar Photovoltaic panels (renewable electricity generation) installed at Limerick (left) and Galway (right) Regional Offices

NSAI's contribution to the overall public sector Reduce Your Use energy efficiency campaign in winter 2022/23 was used by the SEAI as a mini-case study (see Appendix I). NSAI ran a Reduce Your Use campaign in winter 2023/24 in collaboration with staff across all its facilities in the state and will continue to run imaginative and engaging campaigns during winter 2024/25.



Source: SEAI

Figures 16a and 16b: Examples of visual materials used in NSAI's Reduce Your Use campaign winter 2024/25

6.2 Heating and lighting measures

The following measures have been implemented in all buildings:

- Turned off heating and utilities outside of building operating hours, e.g. outside office hours in administrative buildings.
- Set internal space heating temperatures to 19 degrees Celsius.
- Shut down heat in office buildings at least 1 – 2 hours before buildings closed.
- Optimised water heating to save energy.
- Reduced unnecessary use of lighting in key buildings.
- Turned off display lighting/window/feature display lighting between 5pm and 7pm in most buildings.

- Run energy efficiency campaigns in advance of holiday periods, including 'switch off' campaigns ahead of October bank holiday weekend and annual Christmas closure.

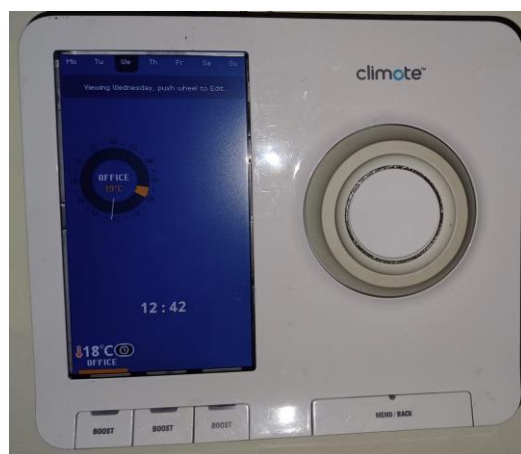


Figure 17: Example of a temperature control used in an NSAI building

6.3 Control and scheduling measures

The following measures were implemented in all buildings:

- Ensured that operational control is appropriate to the hours of work and services delivered.
- Reduced electricity use at peak times (5pm – 7pm).
- Corresponding with a reduction in occupancy, minimised the space occupied and heated.
- Challenged the core and extended hours, e.g. to eliminate heating of buildings before staff are in attendance.

6.4 Facilities assessment measures

The following measures were implemented in most buildings:

- Out of hours walk-through carried out in various buildings.
- Energy efficiency assessment or audit of buildings.
- Operations and maintenance audit.
- Development of an operational control and measurement process.

6.5 Improving Our Vehicles

NSAI has a relatively small fleet of four commercial vehicles. As vehicles fall due to be replaced between now and 2030, NSAI will move to replace firstly the lighter fleet vehicles, e.g. vans, with cleaner vehicles, as suitable to business requirements.

It is recognised generally that there is more of a challenge at present in the market in replacing heavy goods vehicles (HGVs) or heavy duty vehicles (HDVs), such as trucks, with fully renewable alternatives to diesel-powered engines. In the interim, as part of the

green transition, increased bio-diesel blending rates or the roll-out of bio-CNG may reduce the levels of emissions from HGVs, pending fully-renewable alternatives. NSAI continues to monitor developments in the market-place in that regard, in terms of the larger vehicles.

6.6 Water footprint

Given that water treatment and waste water treatment have their own carbon footprints, NSAI will examine how it can track and manage its water footprint across all locations, with a view to improving its use of water. NSAI will examine how it can reduce its own water footprint.

6.7 Waste segregation and internal circular economy

NSAI operates a three-way segregation of waste streams at its Swift Square, Santry headquarters – residual/general waste, recycling waste and organic/biowaste (brown bin material). NSAI avails of waste electrical and electronic equipment recycling (WEEE) opportunities to re-cycle these materials, including for example at the NML.

6.8 Moving from paper-based to digitalised processes

NSAI examines the possibilities and opportunities for digitisation of paper-based processes, including as part of its strategic objective of being an exemplar in digital transformation. Some standards require hard copy only. NSAI is examining the possibilities around replacing paper certificates issued by some business units with digital equivalents.

7. Our Wider Climate Action Plans

Beyond the Public Sector Climate Action Mandate requirements, during 2022-23, NSAI began the development of a Climate Action and Sustainability Centre of Excellence to embed and drive climate action across all business directorates in the organisation and to support business and enterprise in Ireland in the journey to net zero emissions.

It is part of NSAI's Strategic Plan 2022-2026 to become an exemplar organisation in climate action and sustainability, in particular in its technical support to Irish business and enterprise. The first personnel in the Climate Action and Sustainability Centre of Excellence was appointed in mid-2023.

8. Supporting Business in Ireland on the Journey to Net Zero By 2050

The NSAI's role is ultimately to support business in Ireland through under-pinning our quality infrastructure, the dissemination of the best available information on technical standards for processes and products, the development of standards, and also to provide critically important certification to business and enterprise. Standards, certification and

metrology (including both the NML and Legal Metrology Services) all have a role in supporting businesses on their own journeys to net zero by 2050.

The NSAI is committed to raising awareness amongst businesses of the standards that are already available to help in de-carbonising the economy and to also supporting enterprise in the development of new standards that may be required. The NSAI will continue to adapt its approach to supporting businesses in accessing information on best practices, new knowledge, state of the art and compliance in the areas of climate action, sustainability and environment.

8.1 NSAI, international standards and climate action and sustainability

NSAI is a member of the International Organisation for Standardisation (ISO), which in 2021 approved its London Declaration *"to ensure that ISO International Standards and publications accelerate the successful achievement of the Paris Agreement, the United Nations Sustainable Development Goals and the United Nations Call for Action on Adaptation and Resilience."*

In 2024, ISO published a suite of circular economy standards to help guide organisations of all types and sizes in the shift towards a circular economy model that emphasises the sustainable management and renewal of natural resources. These standards are available online from the NSAI Standards Shop.

In early 2025, NSAI held the first meeting of its new national standards committee for the bioeconomy (under the national Bioeconomy Action Plan 2023-27). The bioeconomy offers an opportunity to replace fossil-fuel based raw materials and products with biological and biomass replacements including for fuels, chemicals, plastics and construction materials. Across all of the European Union member states, Ireland is in a good position to make the most of the bioeconomy for sustainable development.

Solutions for the circular economy transition

ISO 59000 family of standards

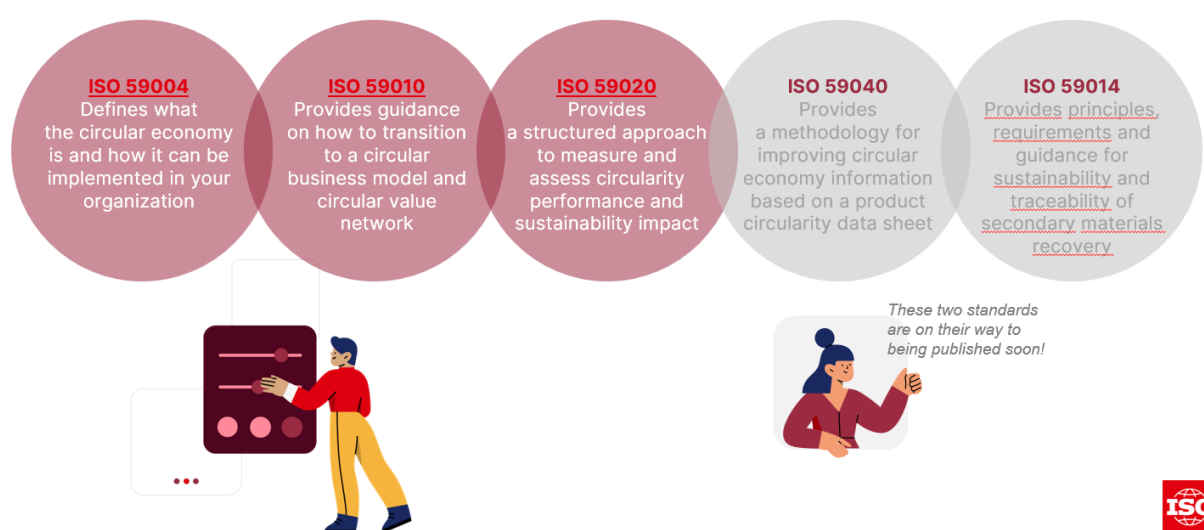


Figure 18: The ISO 59000 family of circular economy standards – available from the NSAI Standards Shop

ISO working groups also developed a draft frameworks document on ESG and a draft management system for implementation of the UN SDGs during 2024. These will be available as a guidance and support to SMEs in particular.

NSAI is also a member of other international standards organisations such as CEN CENELEC and IEC who are also collaborating across many countries to support EU Green Deal objectives and the UN SDGs, as we make the journey towards net zero by 2050.

In September 2024, ISO made an amendment 'Climate action changes' to a range of its management standards, adding the requirement that "The organization shall determine whether climate change is a relevant issue."

Standards are available to purchase at: <https://shop.standards.ie>

**Find and purchase standards
at:
[NSAI Standards Shop](https://shop.standards.ie)**

8.2 Environmental, social and governance (ESG) and sustainability reporting

In tandem with its NSAI Climate Action Roadmap, NSAI is working, through its Climate Action and Sustainability Centre of Excellence, to align its climate action mandate and sustainability activities with the EFRAG voluntary SME standard for sustainability reporting to the EU Corporate Social Responsibility Directive, with a view to being an exemplar and offering a 'worked' example to businesses.

NSAI participated in the development of the ISO workshop agreement on ESG, 'Framework for implementing environmental, social and governance (ESG) principles', and this Climate Action Roadmap has regard to those. This ISO ESG guidance document is of particular relevance to SMEs and is available free of charge at the NSAI Standards Shop at [IWA 48:2024](#).

8.3 NSAI Certification role in verifying businesses' greenhouse gas emissions and in circular economy

NSAI Certification division is working towards achieving ISO 17029:2019 conformity assessment accreditation to provide an ISO 14064-3:2019 greenhouse gas emissions and removals statements verification service offering to businesses.



NSAI's existing verification services, including EU Ecolabel verification, can assist businesses in meeting sustainability standards.

8.4 Reducing the carbon impact of the construction sector – *agrément*, MMC and BIM

Across the European Union, buildings generally account for on average 37% of total greenhouse gas emissions. NSAI Certification is also working in the areas of *agrément* certification and supporting both government sustainability and housing policy objectives in modern methods of construction (MMC) and building information modelling (BIM). BIM certification is not mandatory, but it is increasingly seen as a requirement in tenders, especially in the public sector. BIM certification is based on ISO 19650-2, with alignment to best practice from national and international sources. An NSAI MMC toolkit is available at: <https://www.nsai.ie/certification/agreement-certification/modern-methods-of-construction-certification/mmc-toolkit/>

9. Beyond 2030 – the challenge of achieving deeper de-carbonisation ambitions

For information on the range of services available from NSAI Certification, that can help your business or organisation on its sustainability and net zero journeys, go to:

<https://www.nsai.ie/certification/>

Beyond the 2030 public sector climate action mandate targets of a 51% reduction in carbon-related emissions by 2030 and a 50% reduction in energy consumption, it is becoming clearer that additional capital resources will be required to achieve the level of deeper

de-carbonisation required to reduce energy consumption and replace fossil fuels.

Beyond 2030 more renewables will be required on the electricity and gas grids and ongoing attention will need to be given to how we do business so as to maximise our ongoing de-carbonisation efforts.

APPENDIX I

Annex of Actions – NSAI Climate Action Roadmap

NSAI Climate Action Roadmap - 'living' document - key actions

Page	Section	Topic or action		Identifier
3	1.1	NSAI as a climate action and sustainability exemplar	Strategic Project 3 'Climate Action and Sustainability' under the NSAI's Strategic Plan 2022-2026 sets out NSAI's commitment to structuring its services to support the Green Transition, provide an infrastructure to support that transition, and establish NSAI as an exemplar organisation in terms of internal environmental targets.	1
5	1.3	NSAI Climate Action Roadmap	The NSAI Climate Action Roadmap is a framework 'living' document and will continue to be updated and developed on an ongoing basis.	2
5	1.4	United Nations Sustainable Development Goals (UN SDGs)	NSAI will focus on a number of priority UN SDGs, whilst being supportive of all of them.	3a
5			NSAI will develop a policy on its support for the UN SDGs in its activities.	3b
7	2	Climate action and sustainability leadership training	NSAI will conduct workshops and identify senior leadership and board member training opportunities.	4
7	3	Climate action targets	Reduce GHG emissions by 51% in 2030. Increase the improvement in energy efficiency (as part of the public sector) from the 33% target in 2020 to 50% by 2030.	5a 5b
8	4.1.3	Journey to our targets	NSAI will maintain I.S. EN ISO 50001:2018 Energy management system certification.	6
15	4.4	Achieving deeper decarbonisation	Planned installation of solar panels in the NSAI National Metrology Laboratory (NML) and two other locations in consideration (planned project 2026-27, subject to budgetary conditions). Upgrade of NML chiller system and related pipework.	6a 6b
15			Potential installation of a heat pump system at Limerick Regional Office.	6c
17	4.5	Implement EMS in medium-term	The NSAI will implement an Environmental Management System and seek I.S. EN ISO 14001:2015 certification subject to budgetary conditions.	7

17	5	Further greening the procurement policy	Examination of plastic material usage across the organisation in line with UN SDG 12.	8
20	6.1	Energy use campaigns	The NSAI will run internal campaigns to increase awareness of energy use amongst staff, including 'switch off' campaigns ahead of bank holiday weekends and annual Christmas closure.	9
21 - 22	6.5	Improving Our Vehicles	Lighter fleet vehicles (vans) will be replaced with cleaner alternatives, as they fall due to be replaced, as suitable to business requirements. NSAI will continue to monitor market-place developments regarding the future availability of HGV/HDV vehicles suitable to the nature of the specialised work involved.	10a 10b
22	6.6	Managing water footprint	The NSAI will examine and track its water usage across the organisation and explore methods to reduce its water footprint.	11
22	6.8	Moving from paper-based to digitalised processes	On an ongoing basis, NSAI is reviewing the possibilities for the digitisation and digitalisation of paper-based processes as part of its digitalisation strategic objective.	12
24	8.2	Aligning NSAI climate action and sustainability efforts with the Public Sector Climate Action Mandate and the EFRAG voluntary SME standard.	NSAI will continue to align its climate action and sustainability activities with the Public Sector Climate Action Mandate (under national Climate Action Plans) and also with the EFRAG voluntary SME standard for sustainability and environmental, social and governance (ESG).	13
24	8.3	Supporting businesses - greenhouse gas emissions and removals statements	NSAI Certification division is working to achieve accreditation to ISO/IEC 17029:2019 to provide an accredited ISO 14064-3:2019 greenhouse gas emissions and removals statements verification service offering to businesses.	14

APPENDIX II

SEAI Mini-case study on NSAI's contribution to Winter 2022/23 Reduce Your Use Campaign



REDUCE YOUR USE

NSAI

The National Standards Authority of Ireland is Ireland's official standards body. NSAI improves the performance of Irish business and protects consumers through the setting of standards and issuing of certification in the quality and safety of goods and services.

NSAI is a business support agency under the remit of the Department of Enterprise, Trade and Employment. NSAI aims to inspire consumer confidence and create the infrastructure for products and services to be recognised and relied upon, all over the world.

NSAI has a key focus on climate action and sustainability in its Strategic Plan 2022-2026. The Reduce Your Use campaign is one of several workstreams progressed by the NSAI with the objective of reducing resource use, enabling behavioural change, and ensuring that NSAI acts as an environmental exemplar in achieving public sector 2030 targets.

NSAI sustainability teams, drawn from across the organisation, completed several initiatives to engage staff, improve operational control of plant, measure effectiveness and improve efficiency.



30% energy savings
(Winter 2022/23 compared with Winter 2020/21. Includes thermal savings of 53% plus.)



9 buildings





seai
Sustainable Energy Authority of Ireland



NSAI
Regional Office



Riadas na hÉireann
Government of Ireland



OPW



Optimising Power @ Work



Heating and lighting measures

The following measures were implemented in all buildings:

- Turned off heating and utilities outside of building operating hours, e.g. outside office hours in administrative buildings.
- Set internal space heating temperature to 19 degrees Celsius.
- Shut down heat in office buildings at least 1–2 hours before buildings closed.
- Optimised water heating to save energy.
- Reduced unnecessary use of lighting in key buildings.
- Turned off display lighting/window/feature display lighting between 5pm and 7pm every day in most buildings.



Control and scheduling measures

The following measures were implemented in all buildings:

- Ensured that operational control is appropriate to hours of work and services delivered.
- Reduced electricity use at peak times (5pm–7pm).
- Corresponding with a reduction in occupancy, minimised the space occupied and heated.
- Challenged the core and extended hours, e.g. to eliminate heating of buildings before staff are in attendance.



Facilities assessment measures

The following measures were implemented in most buildings:

- Out of hours walk-through carried out in various buildings.
- Energy efficiency assessment or audit of buildings.
- Operations and maintenance audit.
- Development of an operational control and measurement process.



NSAI Standards Forum 2022
Sustainable Buildings
Energy Efficiency
Circular Economy

Conferences and events are an important activity and are held in hybrid and online formats

