

SETU Climate Action Roadmap

June 2024

Version 3.0



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Contents

Document Details.....	1
Contents.....	2
Abbreviations:.....	3
Definitions.....	4
1. Introduction and Progress to Date.....	5
2. SETU People.....	7
2.1 Our People.....	7
2.2 Leadership and Governance of Climate Action.....	7
2.3 Engaging our People.....	8
3 Our Targets.....	10
3.1 SETU's Modelling Approach.....	10
3.2 Project Scenarios.....	11
3.3 Project Funding.....	11
3.4 Importance of Decarbonising the National Grid.....	12
3.5 Obligated Targets and Current Emissions.....	13
4 Our Way of Working.....	13
5 Green Public Procurement.....	144
6 Resource Use.....	144
6.1 Paper.....	144
6.2 Water.....	154
6.3 Waste.....	155
7 Our Buildings and Vehicles.....	177
7.1 Bicycle Friendly Campuses.....	177
7.2 Zero Emissions Vehicles.....	199
7.3 Building – Display Energy Certificate (DEC).....	199
7.4 Future Fossil Fuel Heating Systems.....	20
8 Conclusion.....	21
9 Appendices.....	
Appendix 1 - Governance Structure – Roles and Responsibilities.....	
Appendix 2 – Draft Terms of Reference SETU Green Team.....	
Appendix 3 - Project Scenarios.....	

Abbreviations:

SETU	South East Technological University
CAP	Climate Action Plan
EPO	Energy Performance Officer
GHG	Green House Gases
CAP21	Climate Action Plan 2021
GTT	Gap to Target
OPW	Office of Public Works
SEAI	Sustainable Energy Authority of Ireland
M and R	Monitoring and Reporting
tCO ₂	Tonnes of Carbon Dioxide
kWh	Kilowatt hour
LCC	Performing Life Cycle Costing
LCA	Life Cycle Analysis
GPP	Green Public Procurement
TFI	Transport for Ireland
EEDPP	Energy Efficiency and Decarbonisation Pathfinder Programme
BEC	Better Energy Community Scheme
DEC	Display Energy Cert
EV	Electric Vehicle
M&R	Monitor and Reporting
kgCO ₂	Kilograms of Carbon Dioxide
SDG	Sustainable Development Goals
EDI	Equality, Diversity, and Inclusion
UDL	Universal Design for Learning
N-TUTORR	National Technological University Transformation for Resilience and Recovery
SATLE	Strategic Alignment of Teaching and Learning Enhancement Fund
AVPS	Associate Vice President for Sustainability

Definitions

ISO 50001	EN ISO 50001:2018 is the international standard for energy management.
Green Public Procurement (GPP)	Green Public Procurement (GPP) (or Sustainable Procurement) is a process where public authorities seek to source goods, services or works with a reduced environmental impact.
Sustainable Energy Authority of Ireland (SEAI)	The SEAI is Ireland's national sustainable energy authority and works with householders, businesses, communities, and government to create a cleaner energy future.
Climate Action Plan 2021 (CAP21)	CAP21 provides a detailed plan for taking action to achieve a 51% reduction in overall. Greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as committed to in the Programme for Government and set out in the Climate Act 2021.
Decarbonisation	Decarbonisation is the removal or reduction of carbon dioxide inputs from human activity into the atmosphere which is important for limiting global warming. The main levers for decarbonisation are the development of renewable energies, switching fuels and the improvement of energy efficiency.
Gap to Target model (GTT model)	The gap-to-target model (GTT model) is a spreadsheet model for use by public bodies to evaluate their energy efficiency (EE) performance and energy-related greenhouse gas (GHG) emissions over time, using data and methodologies from SEAI's Public Sector Monitoring and Reporting (M&R) system
Energy Efficiency	Energy efficiency is a reduction in the energy used to do the same task. Retrofitting options can be used to reduce energy usage. These may include switching to LED lighting and energy efficient appliances or upgrading insulation. Energy efficiency has a variety of benefits including reducing GHG emissions, reducing demand for energy imports, and lowering energy costs.
Display Energy Certificate (DEC)	A Display Energy Certificate (DEC) shows the energy performance of a building based on actual energy consumption recorded over the last 12 months. It compares the actual energy use against the energy use for a benchmark building of the same type. Similar to a domestic Building Energy Rating (BER), DEC's are displayed on a scale from A to G, with an A rating being the most efficient and a G rating being the least efficient.
EEDPP	Energy Efficiency and Decarbonisation Pathfinder Programme.
CAM	The Public Sector Climate Action Mandate (CAM) highlights the main climate action objectives for public bodies and will be reviewed annually.

1. Introduction and Progress to Date

South East Technological University (SETU) was established on May 1st 2022 and is the first University in South East. In May 2023 SETU published its inaugural Strategic Plan (SP), 'Connecting for Impact', structured around 12 Strategic Objectives for Innovation and Research, Our Learners, Our Engagement and Our Staff. Sustainability is central to the SETU SP 'from the vision 'SETU will be a leading global technological University with transformative impact on our community, the south east of Ireland and beyond', to the Mission which states that 'SETU is an international, entrepreneurial and connected multi-campus Technological University that will drive sustainable economic, environmental, cultural and social development in the south east of Ireland', to the SETU Values which include, 'We act sustainably, responsibly and ethically'. The plan is designed to 'Ensure sustainable development is embedded in SETU's leadership, governance and operations, and that the SETU community of staff and students are sustainably aware and incorporate sustainable practice into daily university life' (Strategic Objective 9).

The SETU Climate Action Roadmap sets out the University's plans to reduce emissions and meet decarbonisation and energy efficiency targets as directed by Government. The Roadmap has been prepared in accordance with guidance from the Sustainable Energy Authority of Ireland (SEAI), the Climate Action and Low Carbon Development (Amendment) Act 2021 and the subsequent measures and goals for the public sector set out in the Climate Action Plan (CAP) 2019 including both updates and actions contained in CAP21 and CAP23 and the Public Sector Climate Action Mandate (CAM) 2024.

The national Climate Action Plan stipulates that the public sector will lead by example in delivering on Ireland's decarbonisation commitments. This Roadmap demonstrates how SETU will achieve emissions reductions to 2030. As a public sector organisation SETU has two targets under CAP21 focused on energy:

Target 1 Decarbonisation: To reduce greenhouse gas (GHG) emissions from energy by 69.5% to 1786.9 tonnes of Carbon Dioxide (tCO₂) by 2030, compared to a 2016-2018 (average) baseline of 5853.2 tCO₂; and

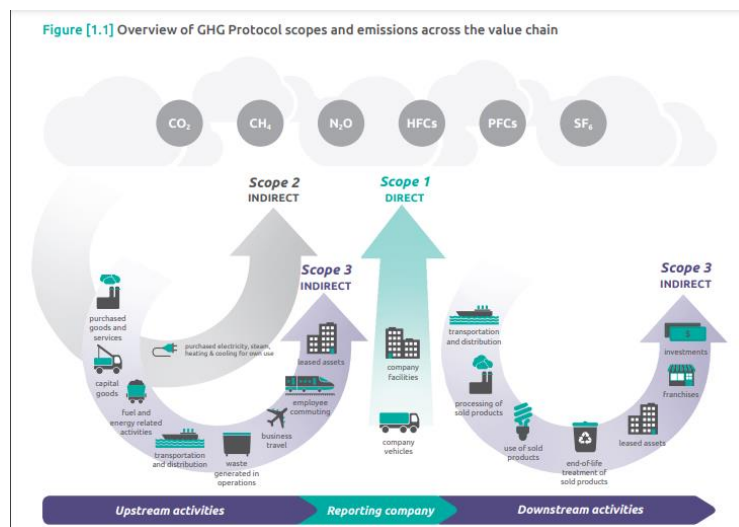
Target 2 Energy Efficiency: To improve energy efficiency by 50% by 2030 compared to a 2009 baseline. These targets focus on the emissions and energy performance within SETU's control; from electricity purchased by the

organisation, and emissions produced from fossil fuels used for heating and hot water.

Using the “Gap To Target” (GTT) model tool, SETU is estimated to achieve a 70% GHG emissions reduction by 2030. Presently, SETU have two gap-to-target models (Carlow and Waterford Campuses) which will be merged in 2024 on the SEAI’s M&R system. The SETU Climate Action Roadmap will be reviewed and updated to reflect this. The emissions targets will be achieved by;

- electricity grid decarbonisation,
- completion of decarbonisation and energy efficiency projects, subject to funding and resources,
- availability of technological solutions.

Using the Internationally recognised GHG Protocol, emissions are categorised into three scope definitions: scope 1 (direct emissions from sources that are owned or controlled by an organisation), scope 2 (indirect emissions from electricity), scope 3 (indirect emissions). Please see Table below -



GHG protocol Scope 1, 2 and 3 emissions

Source: <https://ghgprotocol.org/corporate-value-chain-scope-3-standard>

The SETU Roadmap is a live document, which will be updated annually or as required, to reflect SETU’s progress and to respond to requirements under the CAM.

SETU has published its 2022-2023 Annual report ([link](#)) detailing progress made under Strategic Objective 9, Sustainability, and examples of sustainability activities undertaken in the period. Future reports will specifically detail GHG emissions, SETU progress on the Climate Action Mandate and compliance with Circular 1/2020.

2. SETU People

2.1 Our People

As part of the SETU SP, the University is committed to ensuring that sustainable development is embedded in SETU's leadership, governance and operations, and the SETU community of staff and students are sustainably aware and incorporate sustainable practice into their daily University life and have identified the following roles:

Role	Name	Position/Grade
Climate and Sustainability Champion	David Ryan	Associate Vice President for Sustainability
Energy Performance Officer	Elaine Sheridan	Vice President of Corporate Affairs
Green Teams	Staff and Student representation	Various

The University has now appointed a new Associate Vice President for Sustainability (AVPS) and is establishing the office for Sustainable Development. The AVPS is the SETU Climate and Sustainability Champion with responsibility for implementation and reporting on the Climate Action Roadmap.

As required by the Public Sector Energy Strategy the role of Energy Performance Officer has been held by the Vice President of Corporate Affairs, who is a member of the EMT of the University.

Oversight and monitoring of the SETU Climate Action Roadmap is a priority for the President and Executive Management Team (EMT) and a new Sustainability sub-committee of the University Governing Authority.

2.2 Leadership and Governance of Climate Action

The Leadership and Government structure outlines the structure of key SETU members that are focused on delivering the SETU Climate Action Strategy. The following chart shows the Governance structure:

The inaugural multi-campus SETU core Green Team has convened and the full team membership is as follows:

SETU Green Team*

Representing	Position
Executive Management Team (EMT)	Associate Vice President for Sustainability
Estates	Estates managers, energy officers and sustainability manager
Finance	Vice President Finance
Capital Development	Capital development manager(s)
People, Culture and EDI	To be appointed
Significant Energy Users (SEU)s	Director of ICT and digital transformation
	Green lab/research representative
	Novus manager (catering)
	Additional to be identified and appointed, for example Data Centre manager/s
Student voice	SU representative(s) to be appointed
Faculty/Function	Faculty/Function climate champion(s) to be appointed

*See Appendix 1 for details of roles and responsibilities

SETU climate action Leadership and Governance structure will ensure that annually 'green days' are held to engage on climate issues, including a focus on decreasing the Universities carbon footprint. For the Academic year 2024/2025 Green Day is scheduled for Q4 2024. SETU will, where possible link with national and local events to increase impact. Green Days provide an opportunity for students, staff and the wider community to engage on climate related issues. All members of Green Teams and those who can significantly affect the Universities carbon footprint will undergo appropriate training in the 2024/2025 academic year.

SETU will also use the training resources provided through Sustainable Energy Authority of Ireland (SEAI) Training Academy. Training for Executive Management Team is scheduled for Q4 2024.

To endorse the SETU Climate Action Roadmap a SETU Sustainability Strategy and Implementation Plan will be approved by GB and EMT by the end of 2024.

2.3 Engaging our People

SETU aims to engage our student body, staff and wider community in becoming active citizens for climate change and motivate students and staff to

commit to learning more about our climate action targets and taking responsible action to achieve them.

The University will utilise opportunities through programmes such as N-TUTORR and SATLE. The N-TUTORR programme is designed to transform learning, teaching and assessment by focussing on transforming the student experience and developing the capabilities of all staff to address a sustainable pedagogical and learning environment with particular and critical focus on the Sustainable Development Goals (SDGs); equality, diversity, and inclusion (EDI) and universal design for learning (UDL). SATLE is the strategic alignment of the enhancement of teaching and learning and supports projects and initiatives in sustainability, digital transformation and academic integrity. Both SATLE and N-TUTORR are supporting progress towards building sustainability competencies and educating our students for sustainable development (ESD).

SETU is part of the OPW's Optimising Power @ Work Campaign. The core principle of Optimising Power @ Work is to work with staff and students to encourage behavioural change regarding energy usage, with the overall aim of identifying and eliminating waste. Working with Optimising Power at Work Campaign and SEAI, SETU will engage with staff and students through:

- Annual Energy Awareness Day - This day will consist of an energy conservation information stands with targeted site-specific information and insights. Interactive displays and challenges such as the Watt Challenge.
- Annual Awareness Day talk for students and staff with promotional and presentational materials. The purpose of the talk is to present climate change, promote climate action and encourage peer participation.
- Workshops for Department Working Groups (SEUs). Meet with high-SEU, Mid-SEU and Low SEUs, review metrics, develop ideas to optimise, trial and report.
- Green Team Meetings. These meetings will be used for planning, strategising, reviewing activities and updating the register of opportunities.

SETU participates in the 'Reduce Your Use' Campaign', a joint initiative of SEAI and OPW to support public bodies in running a winter energy awareness campaign for staff, focusing on heating, lighting, operating hours, and audits.

SETU will extend the 'Green Lab Certification' process to all Science and Research Labs, across campuses. The certification is recognised by the United Nations Race to Zero campaign as a key measure of progress towards a zero-carbon future. This certification process is a proven, scalable programme that helps organisations achieve their sustainability goals. The process offers support and methods rooted in science to dramatically reduce the environmental impact of laboratories without disrupting the critical work underway.

SETU is a participant in in SEAI's Public Sector Partnership Programme. The Partnership Programme is a comprehensive support package, that provides expert support to identify and assess the potential savings and guidance to develop, execute and maintain energy reduction plans. Partnership Support Managers are appointed to SETU and they engage on a high level to deliver long term savings in energy usage.

All SETU campuses to be certified to the international energy management standard ISO50001:2018. Currently 5 campuses are included within the scope of the Certification and this will be extended to all campuses, within the next twelve months.

ISO 50001 standard contributes to the following Sustainable Development Goals (<https://www.iso.org/sdgs.html>).



The SETU Climate Action RoadMap will be made available to all staff, students, visitors, contractors, stakeholders and members of the public.

3 Our Targets

3.1 SETU's Modelling Approach

The following sets out the decarbonisation and energy efficiency 2030 targets that apply to SETU and summarises SETU's forecast GHG emissions from

energy consumption; and the organisation's expected energy efficiency by 2030. It includes a summary of the planned projects that will contribute to SETUs decarbonisation and energy efficiency.

The SEAI's gap-to-target model was used to forecast SETU's GHG emissions and energy efficiency. The gap-to-target model consists of a decarbonisation component ('decarbonisation model') and an energy efficiency component ('energy efficiency model'). The energy modelled includes electricity, gas and oil used in the operation of SETU, with conversion factors as per the SEAI gap-to-target model. The results presented in this chapter represent modelling outputs, based on the gap-to-target SEAI version 3.09 released September 2022. As further decarbonisation and energy efficiency projects are developed and progressed, the modelling will be updated to reflect their impact, and results will be reported in future Roadmaps. Modelling is used to project future scenarios based on currently available information and is therefore subject to change.

SETU is a newly formed Technological University and as a result has two gap-to-target tools to model from. From August 2024 SEAI will merge the data on the M&R system. SEAI will publish the M and R Data in Q4 2024 and this will enable the creation of one gap-to-target model for 2023 data. Until then SETU will continue with both gap-to-target tools for modelling purposes. The GtT model aims to develop a pathway for SETU to achieve the targets set out in Chapter 9 of CAP21.

3.2 Project Scenarios

SETU has comprised a list of potential future projects, which will be required to meet our obligated 2030 emissions targets. This list of projects is subject to change as there is future, plans for campus consolidation and proposals for newer buildings.

Please refer to Appendix 3 for the list of proposed projects and Gap to Targets.

3.3 Project Funding

It is proposed that the projects would be implemented over the period 2023-2030. However, all solutions proposed are based on what is currently technically feasible, or options that can reasonably be expected to become available to SETU between now and 2030. A pathway to achieving the decarbonisation and energy efficiency targets has been identified, nevertheless there are costs, challenges, and risks associated with

implementing the proposed projects. However, SETU will continue to source grant funding through EEDPP, SEAI’s BEC and all other suitable areas of grant funding.

3.4 Importance of Decarbonising the National Grid

GHG emissions savings are highly sensitive to changes in the national electricity grid carbon emissions factors. These carbon emissions factors change from year to year as the efficiency of the electricity grid changes. Ireland’s electricity grid has significantly decarbonised in recent years, and it is expected that this trend will continue, as fossil fuels are phased out of power generation. However, some years have seen a backwards shift. For example, in 2021, emissions associated with electricity production increased by 18% from 2020, due to:

- Increased electricity demand
- Less wind power availability
- The use of older plants including a coal fired plant.

The increase in GHG emissions seen in 2021 is not expected to become a trend for Ireland’s electricity production. However, it demonstrates the sensitivity of the grid to these compounded factors and impacts on energy efficiency modelling.

The SEAI publishes projections for supply-side emissions reductions, based on the decarbonisation of the electricity grid and the anticipated increased proportions of biofuels blended in liquid transport fuels. In the most recent projections, the emissions intensity of the national grid is expected to reduce by 77% by 2030, from the 2016-2018 (average) baseline. The forecasts incorporate many variables and assumptions. SETU’s modelling relies upon these SEAI-provided inputs.

3.5 Targets and Current Emissions.

Please see table below which shows GHG thermal and electrical emissions from baseline to 2022 in kgCO₂.

Waterford Campuses	Thermal (kgCO ₂)	Electrical (kgCO ₂)
Baseline 2016-2018 average	1,207,258.3	2,685,710.2
2022 emissions	1,110,077.1	1,780,899
Gap to Target	518,520.6	444,624.1

Carlow Campuses	Thermal (kgCO ₂)	Electrical (kgCO ₂)
Baseline 2016-2018 average	554,886.2	1,405,381.6
2022 emissions	623,407.1	928,253.9
Gap to Target	351,512.9	311,751.1

2030 Energy efficiency targets for both Waterford and Carlow as of 2022 are as follows; Waterford currently at 47.6% improvement since baseline and Carlow currently at improvement since baseline 47.9%.

Please Appendix 3 for Projects current and forecasted models to achieve 2030 targets.

4 Our Way of Working

From 2023 onwards SETU will report GHG emissions and sustainability initiatives on the annual report.

As part of integration of processes and procedures SETU is examining further opportunities to digitalise information, therefore reducing the requirement for printing. Currently the University use online learning platforms (Moodle and Blackboard) enable students to access information in a digital / online format, reducing the need for printing. This has been in place for several years.

SETU Energy management systems have formal ISO50001:2018 certification for 5 of the campuses, which will be extended to all campuses. In addition, the following actions will be completed:

- Our Energy Policy will be updated to compliment SETU draft Sustainability Strategy, Green Team and associated projects.
- Our Energy Manual determines how we manage energy in SETU and is an important reference document. Energy management will continue to be part of staff induction.
- An Energy Review is completed annually and forms a key aspect of ISO50001 as it summarises energy performance and provides the data to inform impact, benefits, issues, and opportunities.
- Operational control and maintenance procedures are in place;
- Systems for Internal Audit, Management Review and Corrective Action Procedures are in place.
- Setting, managing and achieving ambitious targets through continuous improvement projects are part of our ISO 50001 system and a Strategic goal for SETU. SETU will evaluate and consider adding ISO14001 at a later stage.

5 Green Public Procurement

SETU has approved a new Corporate Procurement Plan (CPP) which sets out the University objectives to improve its procurement performance to 2028. One of the key objectives of the CPP is *'embedding the University's commitment to sustainable procurement into all procurement activity'* and SETU will achieve this by developing *'enhanced sustainable procurement supports and tools that ensure that priority is given to sustainability and whole life costs and social responsibility when selecting suppliers and awarding contracts'* and by increasing *'sustainable purchasing criteria and performance of suppliers using futureproof frameworks provided by OGP through Green Public Procurement ('GPP') guidance'*.

In addition, the OGP have developed Green public Procurement criteria, which can be accessed at for purchase of specific items - <https://gppcriteria.gov.ie/>

SETU has included the area of People, Culture and EDI on the membership of its green team in order to focus on developing a training plan for key purchasing personnel and training on the Corporate procurement plan and sustainability implications will take place during the 2024/2025 academic year. This will include low carbon construction methods and low carbon cement materials for directly procured or supported construction projects from 2023.

6 Resource Use

6.1 Paper

SETU are committed to further reducing paper usage by reviewing existing paper-based processes and transitioning these processes into digitalised methods. As part of its SP, SETU will develop a 'Digital Campus Strategy' to advise on future opportunities, investments and priorities, with a view to expanding and enhancing ICT systems and services across all campuses in support of student learning and research, and to ensure a consistent, accessible and equitable experience, to include plans for the digitalisation of paper-based processes. A number of initiatives are already underway including pilot programmes to minimise paper waste in staff offices and the students union move to a digital student handbook for the 2024/25 academic year.

6.2 Water

Currently water usage is measured using meter data and information from Irish Water. SETU will record and track this information to monitor water usage. Locations of water inlets to buildings will be identified and where possible additional water meters will be added. SETU aims to decrease water usage by 10% to 2030.

Drinking water is provided via centrally located refillable water fountains, conveniently located throughout the campuses. This has reduced reliance on plastic bottled water and single use plastic cups.



Water stations are now available across all SETU campuses

6.3 Waste

As part of overall waste reduction SETU will continue to track waste regularly and increase recycling to achieve an 80% recycling rate by 2030.

SETU have piloted the removal of individual bins from offices and lecture rooms. This pilot has been received positively and will be extended to all buildings over the coming years. This will reduce plastic bag usage and general waste further.

SETU are also reducing our reliance on chemicals for cleaning purposes through training and utilisation of new cleaning methods. SETU are currently trialling a solution, which contains no toxic or polluting chemicals and reverts to water and oxygen after use, leaving no environmental damage on any scale.

SETU will continue to provide opportunities for reduction of waste at source. We will work with catering providers to eliminate single use beverage cups by 80% by promotion and incentivisation of 'bring your own cup' and 'coffee2go' reusable cups and delph cups.

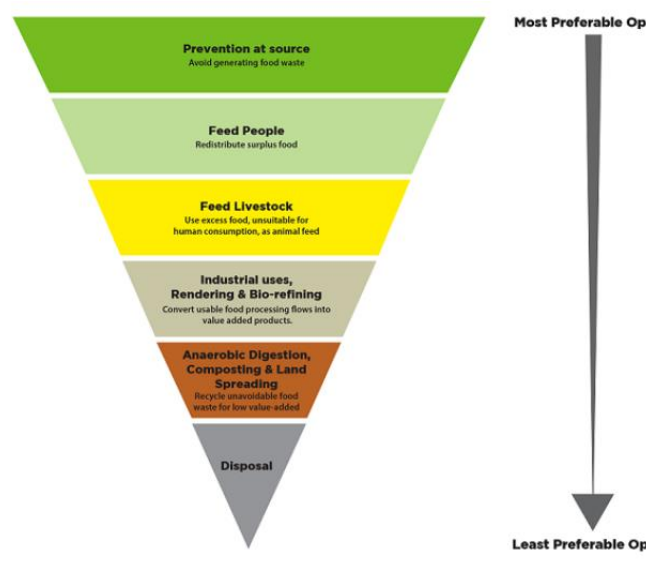


An example of the waste segregation points at SETU

SETU will work with all suppliers to reduce single use plastics at source and where these are required to ensure this plastic is segregated and recycled.

SETU run many events and conferences throughout the year. Where possible consideration will be given to hosting events and conferences on line, reducing the need for food and travel. Where not feasible, measures are in place to address food waste prevention through booking arrangements for hospitality related to these events and conferences.

Using the Environmental Protection Agency (EPA) food waste hierarchy pyramid, please see below, SETU will implement a food waste charter in the 2024/2025 academic year to demonstrate our commitment to measure and report on target-based actions to food waste. On all SETU campuses food waste is currently measured and recorded so we have a base line for a campaign to reduce same.



Source: <https://www.gov.ie/en/publication/824c3-national-food-waste-prevention-roadmap-2023-2025/>

SETU will move to cease using disposable cups, plates and cutlery in any public sector canteen or closed facility, excluding clinical (i.e. non-canteen healthcare) environments, and in publicly funded advertising or broadcasting, where feasible.

Electronic waste, is currently recycled through the WEEE scheme, where SETU work with suppliers to return electronic waste for recycling. Battery collection points are also available across campuses.

In addition, RE-turn machines are available on the Cork road and West campuses to encourage the recycling of plastic, aluminium and steel cans and a scheme is in development for the South Sports and Kilkenny road campuses to collect these items centrally as a fundraising initiative.

7 Our Buildings and Vehicles

7.1 Bicycle Friendly Campuses

SETU has committed to creating bicycle friendly campuses for all its employees and staff. Dedicated bicycle parking is currently available on all campuses including many off-street bike shelters. Many of the bike shelters are located centrally beside campus buildings that promotes accessibility and security.

To promote cycling, the SETU website has a dedicated “Cycling” webpage that displays each campus bike parking map locations, means of access, rental schemes, and bike safety information. Shower facilities are available to cyclists and SETU will continue to improve these facilities.

Through programmes such as the ‘Smarter Travel Scheme’, ‘Ready, Set, Cycle’, ‘Bike Week’, ‘Walktober’, and ‘Marchathon’, SETU are continuously promoting behavioural change towards cycling and walking. By encouraging staff to participate in the “Cycle to Work Scheme”, staff can avail of tax incentives to purchase a new bicycle.

In Q3 2024 SETU were awarded the Smarter Travel Mark – Silver by the National Transport Authority (NTA).



The Smarter Travel Mark recognises the broad range of measures in place that support sustainable and active commuting to campuses. SETU will continue to promote smarter Travel initiatives and actions.

The Waterford campuses are involved with the Transport for Ireland (TFI) Public Bike Scheme and have several public bikes with docking stations located throughout the city and at all main city campuses. Carlow campuses are now served by the Carlow town 'Bolt' electric bikes scheme. This scheme allows staff and students to rent electric bikes and drop off at various locations across Carlow town including docking stations on both the Kilkenny road and South sports campuses. Students are encouraged as part of orientation to register for these bike rental schemes.



Bolt and TFI bicycle stations at the Kilkenny and Cork road campuses

In Q2 and Q3, SETU have continued to engage with Local link Providers to map their services to Student population centres and will continue to expand the 'Getting Here Guides' including all bus and train routes to SETU campuses. This information can currently be accessed through:

<https://www.setu.ie/about/setu-campus/campuses-and-facilities>

In Waterford City the new draft network proposed by NTA for Bus Connects Waterford will see SETU become a hub for bus transport options with connectivity to all campuses. SETU will continue to work in collaboration with TFI to ensure this this network is in place in 2026.

SETU also have also installed EV charging points across on number of campus locations to charge electric vehicles.



EV charging stations at the Cork road and Kilkenny rod campuses

7.2 Zero Emissions Vehicles

SETU recognise the need for electrification of all its vehicles. Currently, SETU use a small number of diesel-powered transport vans and smaller vehicles such as forklifts.

When vehicles are due to be replaced, SETU will look to purchase zero emitting vehicles where operationally feasible to ensure CAP21 targets are met and in compliance with the SI381/2021 Clean Energy Directive. SETU participated in SEAI EV Commercial Fleet Trial in 2023 where SEAI ran a pilot programme to provide EV's to Business. As a direct result of this three month trail an EV was purchased by SETU after the trial period. This EV is currently used by Estates Office Maintenance staff to travel between campuses.

7.3 Building – Display Energy Certificate (DEC)

SETU will ensure Display Energy Certificates are displayed in all SETU buildings (over 500m²) by Q1 2025.

7.4 Future Fossil Fuel Heating Systems

All new and future SETU buildings will not install heating systems that use fossil fuels unless there is no other technical viable non-fossil alternative, for example in older listed buildings. Exceptions would include:

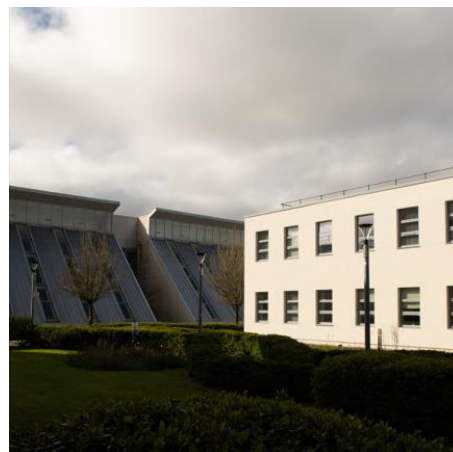
- Fossil fuel use only through the electrical grid.
- The installation of renewable space heating that would increase CO₂ emissions.
- As a backup or for emergency maintenance purposes.

SETU is committed to updating the procurement and design procedures to ensure that the scope for any future builds do not contain fossil fuelled heating systems.

SETU understand the need to reduce the reliance on burning fossil fuels to provide heat to the current buildings and will pursue all avenues to decarbonise legacy heating systems in all the existing buildings, as part of any renovation/upgrade works. This will include a proposed program to replace the existing fossil fuelled heating systems with more sustainable options such as electric powered heat pumps and renewables.

Through EEDPP, SETU has completed deep fabric retrofit of the Business School on the Cork Road Campus. The works included:

- External wall insulation
- Window and door replacement
- Air Tightness and draught proofing works to achieve $<5^3/\text{hr}/\text{m}^2$ @50pa
- Replacement of non-LED lights with LED lighting
- Installation of energy efficient Air Handling Units and associated controls
- BER B rating achieved



Completed EEDPP upgrade of the Business School, Cork Road Campus



Ongoing EEDPP upgrade of the Burrin Building, Kilkenny Road Campus

Q3 2024 will see the completion of upgrade works to the Burrin building, Kilkenny Road campus to include:

- New roof finishes, including new insulation and waterproof membrane
- New high temperature air source heat pumps and peak load gas boilers
- New distribution pipework, pumps, valves and all associated controls
- Replacement of the existing hot water calorifier
- Replacement of existing Air Handling Units
- Replacement of the existing lighting system with new LED lighting

The works will result in the building achieving a 'B' Building Energy Rating and a 50% reduction in carbon emissions.

Building Stock Plans have been submitted to SEAI and these will be reviewed and updated in Q4 2024 as part of SEAI Monitoring and Reporting Scheme.

8 Conclusion

SETU is committed to Energy Efficiency and Sustainability. SETU recognise the scale of the challenge to achieve the step changes required to meet the national emissions reduction targets, alongside tackling the biodiversity crisis. SETU will look to actively contribute to reducing GHG emissions and stay focused on guiding SETU towards an even more sustainable university.



Appendices

Appendix 1 - Governance Structure – Roles and Responsibilities

Role	Responsibilities
Climate and Sustainability Champion	<ul style="list-style-type: none"> • Ensuring that the gap to target model and climate action roadmap are complete. • Approving the universities climate action strategy as part of the overall SETU Sustainability strategy. • Communicating the importance of climate action to ensure that the SETU community of staff and students are sustainably aware. • Ensuring that public sector climate action mandated targets are achieved. • Reporting to the President, EMT and Governing Authority on performance against targets.
Energy Performance Officer	<ul style="list-style-type: none"> • Ensuring that resources are in place to achieve climate action targets. • Approval of annual project plans. • Allocation of project funding. • Reporting to the Climate and Sustainability Champion on performance against targets.
Estates and Sustainability Manager(s)	<ul style="list-style-type: none"> • Promote sustainability and energy awareness • Communicate and implement the SETU energy and Sustainability policy. • Establish and review climate action plans. • Ensure that operational control of Estates Office maintenance activities is consistent with SETU Energy and Sustainability policy, objectives, targets and action plans. • Ensure appropriate communication of operational controls to personnel working for, or on behalf of SETU. • Tracking and recording of non-conformances. • To ensure energy performance improvement opportunities and operational control is considered in the modification of renovated facilities, equipment, systems, and processes that can have a significant impact on SETU energy performance. The result of energy performance evaluation should be documented.

	<ul style="list-style-type: none"> • To plan and promote awareness campaigns; green days etc.
Capital Projects Manager(s)	<ul style="list-style-type: none"> • To ensure energy efficiency forms an integral part in the client brief for all new SETU buildings and refurbishment projects. • To ensure energy performance improvement opportunities and operational control is considered in the design of new, modified and renovated facilities, equipment, systems and processes that can have a significant impact on SETU energy performance. • The result of energy performance evaluation shall be incorporated where appropriate into the specification, design and procurement activities of the relevant project/s • To ensure appropriate communication of operational controls to personnel working for, or on behalf of SETU. • Ensure adherence to all relevant sustainable construction regulations
Students Union Representative(s)	<ul style="list-style-type: none"> • Ensure the student voice in all SETU climate action activity Keep student body briefed about energy and sustainability initiatives and encourage student participation. • Plan and promote awareness campaigns; green days etc. • Lead by example and challenge behaviours • Create, drive and promote energy and sustainability awareness.
Energy Officer(s)	<ul style="list-style-type: none"> • Ensuring that the gap to target model and climate action roadmap are complete. • Maintain and publish the Register of Opportunities (ROO) of energy initiatives which are suggested by the SETU community. • To establish baselines, update and report on EPI tracker, and deviations of energy performance at the University. • Update legal register at planned intervals. • Advise on and participate in energy awareness campaigns
Faculty/Function staff Climate Champions	<ul style="list-style-type: none"> • Act as a link between staff and energy and sustainability initiatives. • Promote energy awareness and climate action among staff and students in SETU. • Update Green Team on new research and advancements in Energy and sustainability topic.

	<ul style="list-style-type: none"> • Provide guidance for staff to take action on operational energy efficiency throughout SETU • Participate in the planning and promotion of awareness campaigns; green days etc.
SEU's (Significant Energy Users)	<ul style="list-style-type: none"> • To review data on energy usage and consumption at SETU. • To provide feedback on possible improved energy efficiency measures available for example IT networks, equipment and associated systems. • To operate and maintain facilities, processes, systems and equipment in accordance with operational criteria. • To ensure operational control of maintenance activities is consistent with SETU Energy and Sustainability policy, objectives, targets and action plans. • To ensure appropriate communication of operational controls to personnel working for, or on behalf of SETU. • To ensure energy performance improvement opportunities and operational control is considered in the design of new, modified and renovated facilities, equipment, systems and processes that can have a significant impact on SETU's energy performance. The result of energy performance evaluation shall be documented.
Finance Representative	<ul style="list-style-type: none"> • Ensure adherence to the national Green Public Procurement Strategy and Action Plan 2024-2027 • To ensure procurement and design procedures in place to comply with the requirement for no fossil fuel heating after 2023. • Advise on achieving relevant targets in the SETU Climate Action Roadmap • Advise on Circular Economy and Bioeconomy implications and opportunities for SETU
People, Culture and EDI Representative	<p>Lead on Climate Action Training for staff and students</p> <p>Advise on achieving behavioural change across the university</p>

Appendix 2 – Draft Terms of Reference SETU Green Team

1. *Title of Committee:* SETU Green Team
2. *Status of Committee:* Sub-committee of the EMT (Executive Management Team)
3. *Guiding principle of SETU Green Team:* To drive and promote activities, procedures and policies that will ensure the achievement of plans and targets in the SETU Climate Action Roadmap and advise on the periodic update of the roadmap.
4. *Responsibilities delegated to SETU Green Team from EMT:*
 - a. The SETU Green Team will be chaired by a member of the EMT as nominated by the President. The Green Team can appoint a deputy Chair if chair is not available for meeting.
 - b. The Green Team will review, revise and be guided by the SETU Climate Action Roadmap and relevant legislation, policies and procedures as appropriate.
 - c. Ensure continual improvement in line with SETU Strategic Objectives.
 - d. Identify and encourage areas of collaboration across all SETU campuses and communities and ensure effective communication on sustainability issues affecting University activities.
 - e. The prioritisation and timely delivery of Sustainable development aims and objectives by responsible persons.
 - f. Ensure that SETU complies with, and where possible exceeds, all applicable legislation, guidelines and any other relevant requirements.
 - g. Setting of targets, use of indicators and the annual review of activities.
5. *Arrangements for the SETU Green Team to report to EMT:*
 - a. The SETU Green Team shall report significant (those with financial implications) decisions to the EMT, and any further committees where relevant following each occasion on which it takes action.
 - b. The SETU Green Team will submit a report on key activity on a annual basis to EMT.
6. *Arrangements for the performance of the functions, duties and responsibilities delegated:*
 - a. The business of the SETU Green Team are conducted through meetings but can be done by conference call, TEAMS and e-mail etc. subject to the Chair's requirements.
 - b. To pass a motion will require two thirds. Casting vote held by Chair.

7. *Membership of SETU Green Teams*

- The proposed membership of SETU Green Teams are representatives from:
- EMT
- Estates
- Finance
- Capital Projects
- People Culture EDI
- SEU's (Significant Energy User's)
- Students Union
- Faculty/Function
- Green Team can invite/co-opt additional members/experts as required

8. *Frequency of meetings*

- a. Meetings will be scheduled on a monthly basis during semester time.
- b. Meetings will require a quorum of 50% plus one.

Appendix 3 - Project Scenarios

The table and graphs below illustrate where SETU is on the road to 2030 as of 2022. All figures obtained using the latest gap to target tool (GTT) available.

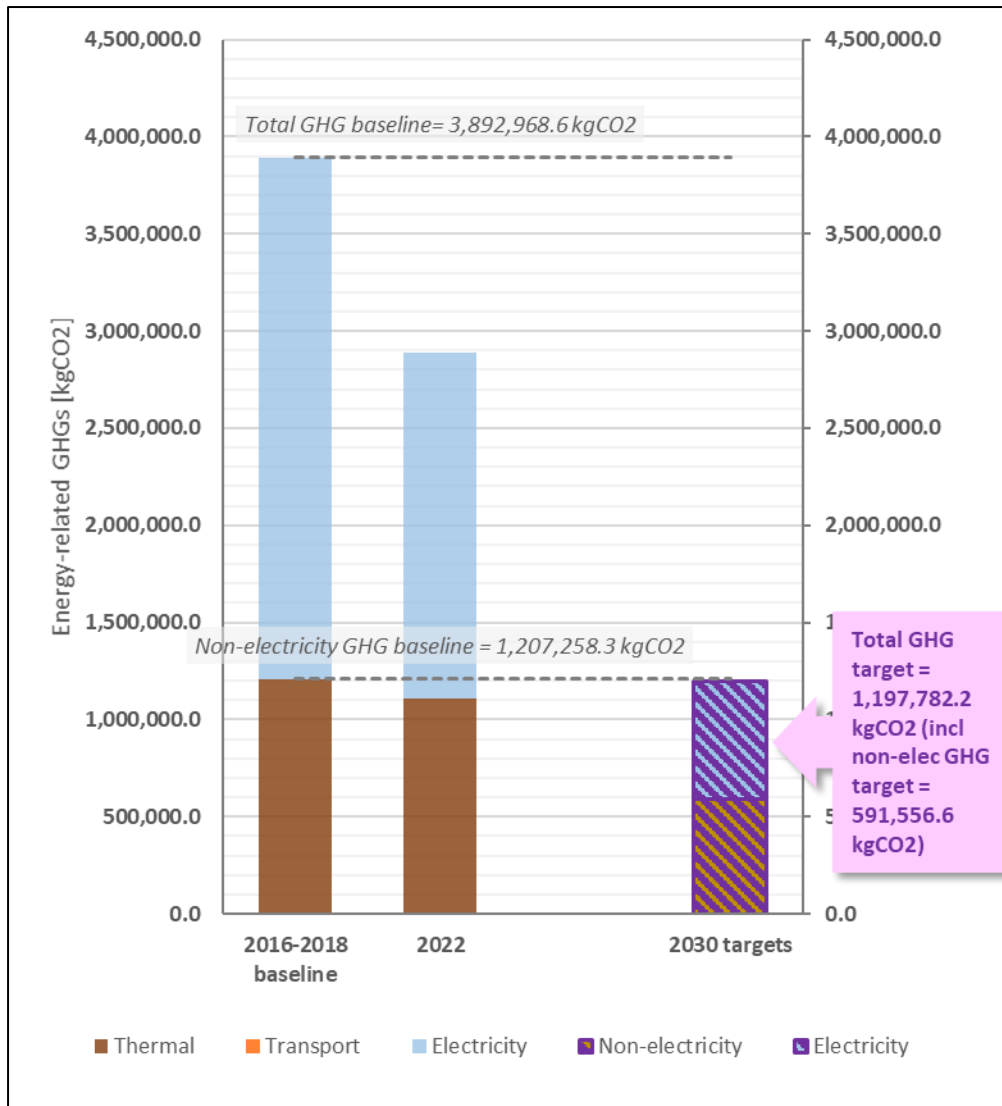


Figure 1; Total 2022 emissions for Waterford Campuses.

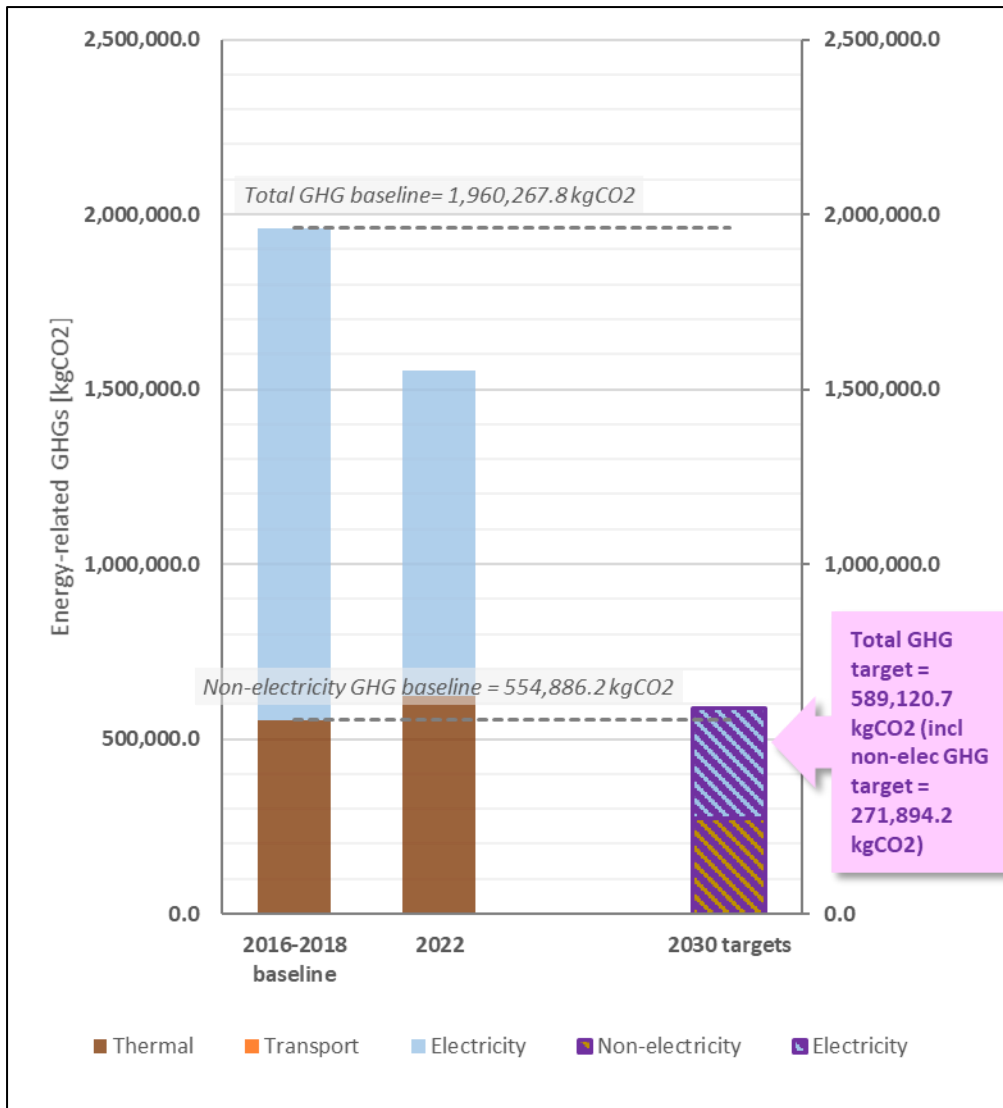


Figure 2; Total 2022 Emissions for Carlow Campuses.

To address this gap SETU completed two scenarios using the latest GTT for both Campuses. The following graphs and associated list highlight the extent of reduction required to achieve targets for both Campuses.

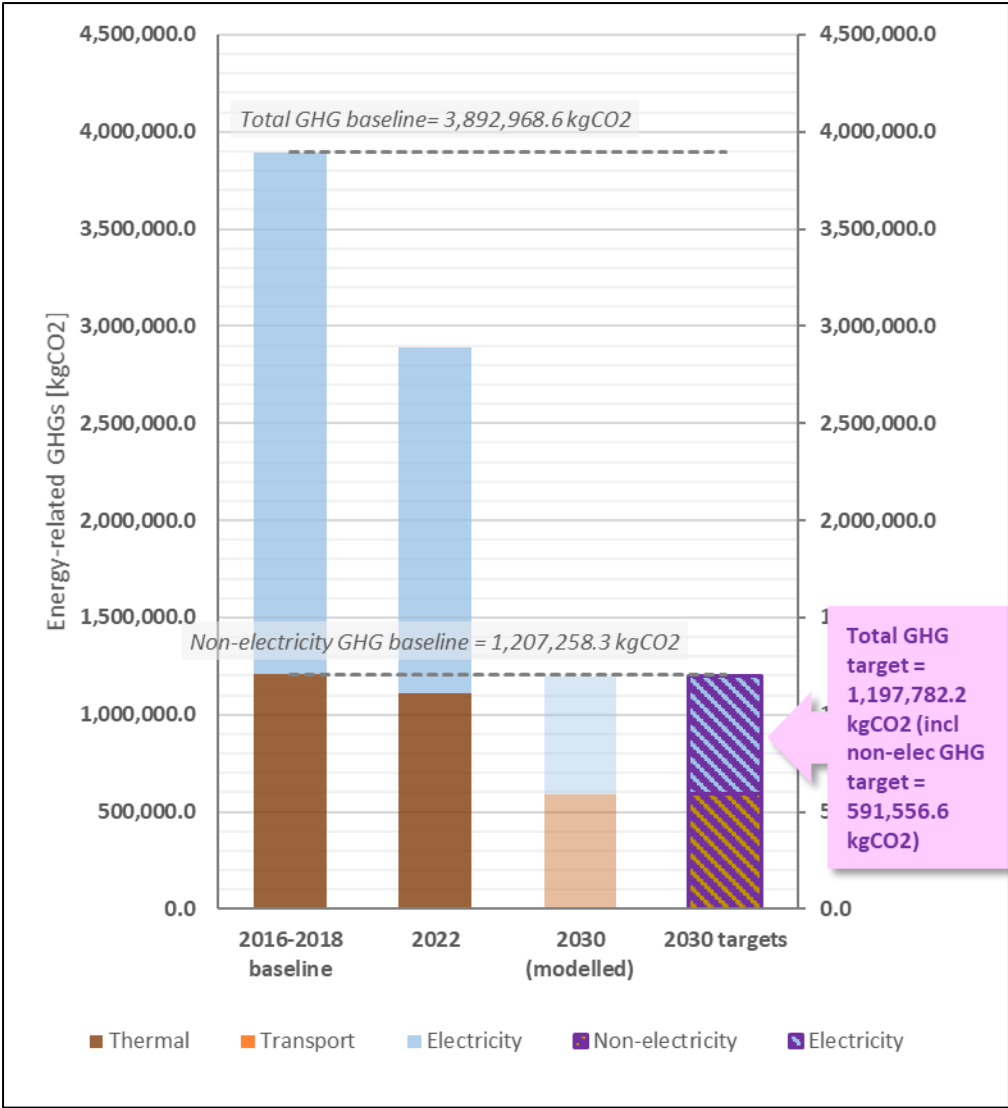


Figure 3; Modelled Total Emissions to 2030 (Waterford Campuses)

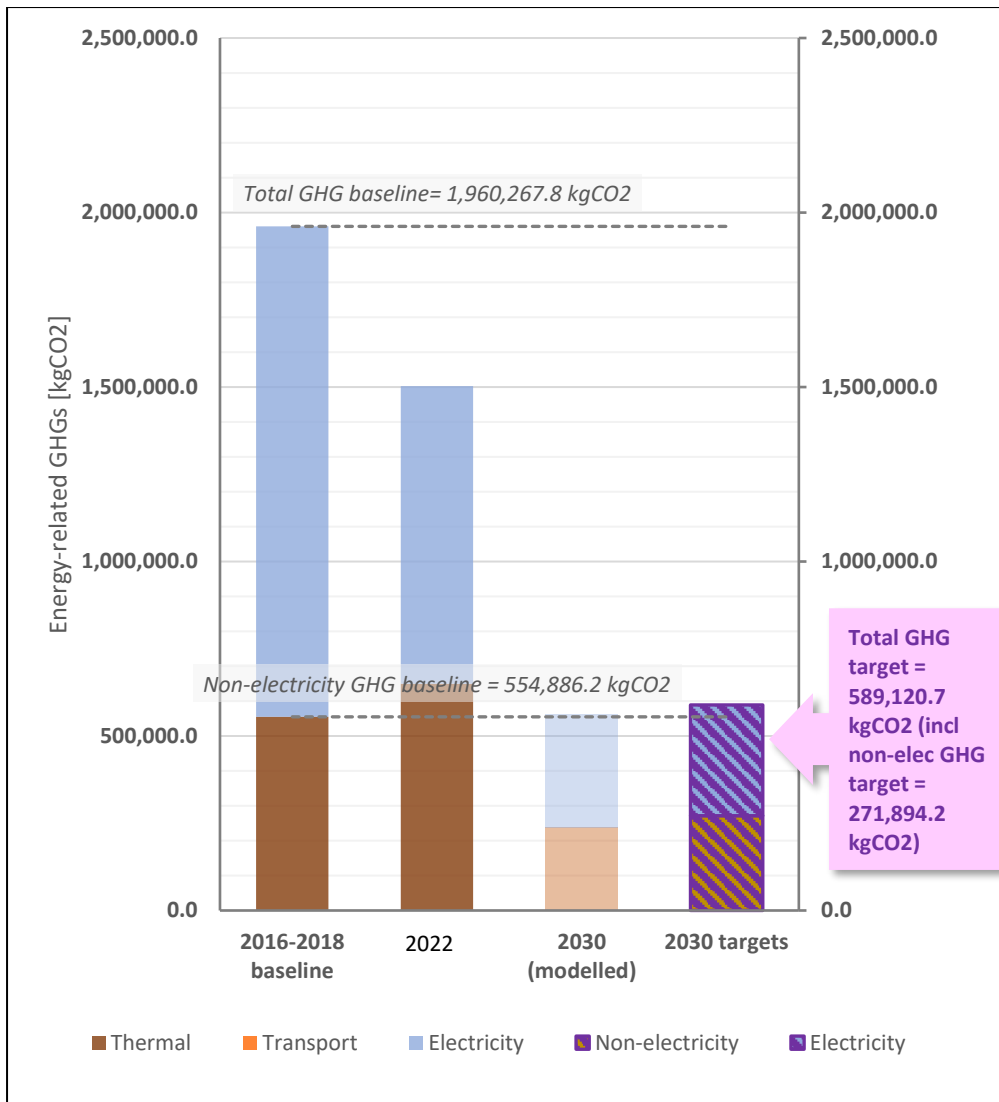


Figure 4; Modelled Total Emissions to 2030 (Carlow Campuses)

SETU Projects required to meet 2030 Targets						
Project name	Implementation Year	kWh	Energy Type	Funding and Resources Committed	Project stage	Update
Business School Deep Fabric Retrofit through EEDPP	2023	23203	Gas	Yes	Yes	Completed
Business School Deep Fabric Retrofit through EEDPP	2023	11517	Electricity (grid)	Yes	Yes	Completed
Burrin Building Retrofit - Installation of High Temperature	2023	34120	Gas	Yes	Yes	In progress

Air Source Heat Pump, and new circulation pumps						
EEDPP Burrin Building Retrofit - Installation of Heat Pumps for hot water	2023	9500	Gas	Yes	Yes	In progress
SETU Thermal Policy to reduce heating to buildings outside core hours and eliminate reliance on electric heaters.	2024	54246	Gas	No	No	EMT and GB approval.
Eng and Science Second Floor deep fabric retrofit.	2025	29215	Gas	No	No	EEDPP stage 2A application submitted to HEA
Eng. and Science Building Deep Fabric Retrofit, remainder of building.	2025	100862	Gas	No	No	EEDPP stage 2A application submitted to HEA.
Killeshin Building Demolition - Gas	2025	20244	Gas	No	No	Exchequer funding required
Killeshin Building Demolition - Electricity	2025	30181	Electricity (grid)	No	No	Exchequer funding required
Burrin Building Retrofit - Roof Upgrade	2025	9500	Gas	No	No	Exchequer funding required
Burrin Building Retrofit - Lighting Upgrade	2025	35128	Electricity (grid)	No	No	Exchequer funding required
LRC Building Retrofit - Fabric Upgrade	2025	50719	Gas	No	No	Exchequer funding required
LRC Building Retrofit - Lighting Upgrade	2025	53052	Electricity (grid)	No	No	Exchequer funding required
LRC Building Retrofit - Air Conditioning Upgrade	2025	25050	Electricity (grid)	No	No	Exchequer funding required

LRC Building Retrofit - AHU Upgrade Heat Recovery	2025	44953	Gas	No	No	Exchequer funding required.
LRC Building Retrofit - AHU Upgrade Fan Energy Efficiency	2025	71920	Electricity (grid)	No	No	Exchequer funding required.
Walton IT – 30% Fabric Improvement	2025	25921	Gas	No	No	Exchequer funding required
SETU Arena 50% Improvement in Fabric and Plant Upgrade	2026	46443	Gas	No	No	Exchequer funding required
TandL, HandS and Library fabric upgrade 30% thermal Improvement across Buildings	2026	79331	Gas	No	No	Exchequer funding required
Nore Building Retrofit - Installation of Air Source Heat Pump, and new circulation pumps	2026	124396	Gas	No	No	Exchequer funding required.
Nore Building Retrofit - Lighting Upgrade	2026	66665	Electricity (grid)	No	No	Exchequer funding required.
Upgrade Existing Plant/AHUs and Improved plant efficiency	2026	65500	Electricity (grid)	No	No	Exchequer funding required
Upgrade of Existing Plant and AHUs	2026	20470	Gas	No	No	Exchequer funding required
BMS and Optimised Controls to all buildings	2028	51175	Gas	No	No	Exchequer funding required
Arclabs_ deep fabric retrofit of fabric and heat pump.	2027	23214	Gas	No	No	Exchequer funding required
ATB Fabric Upgrade 50% Improvement Fabric and Mechanical and Electrical improvements.	2027	33706	Gas	No	No	Exchequer funding required.

Eng and Science Top Floor Upgrade_ Install Heat Pumps	2027	29067	Gas	No	No	Exchequer funding required.
Walton IT Remove Boilers_ Install Heat Pumps	2027	42987	Gas	No	No	Exchequer funding required.
Addition of PPP Building (addition to emissions)	2027	524000	Electricity (grid)	Yes	Yes	Exchequer funding required.
CSB and Burrin AHU Upgrade - Fan Energy	2028	6689	Electricity (grid)	No	No	Exchequer funding required.
CSB and Burrin AHU Upgrade - Heat Recovery	2028	4181	Gas	No	No	Exchequer funding required.
Barrow Building - Lighting Upgrade	2028	40187	Electricity (grid)	No	No	Exchequer funding required.
GAA Building - Lighting Upgrade	2028	11348	Electricity (grid)	No	No	Exchequer funding required.
Carpark Lighting Upgrade	2028	8280	Electricity (grid)	No	No	Exchequer funding required.
Apprentice Building Lighting Upgrade	2028	5761	Electricity (grid)	No	No	Exchequer funding required.
ERIC Building Lighting Upgrade	2029	1789	Electricity (grid)	No	No	Exchequer funding required.
CIM, Avionics, Innovation, Rugby, Chemical Store	2029	12418	Electricity (grid)	No	No	Exchequer funding required.
PV Addition_ Arena, West Campus and Cork Road	2029	163750	Electricity (grid)	No	No	Exchequer funding required.
PV Addition for Carlow	2029	65500	Electricity (grid)	No	No	Exchequer funding required.

Figure 5; SETU Projects timeline to meet 2030 carbon reduction targets