



Bord Oideachais & Oiliúna
LUIMNIGH & AN CHLÁIR

LIMERICK & CLARE
Education & Training Board

Climate Action Roadmap 2024

November 2024

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Limerick and Clare Education and Training Board Strategy Statement 2022-2026

Document Control

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Disclaimer

The 2023 Limerick and Clare Education Training Board Climate Action Roadmap was compiled using data from the year 2023. The road map was completed prior to the issuing of DoE/ DFHERIS guidance notice for ETB's on 3rd December 2024. The information contained in this report reflects the intentions of the ETBs commitment to adopting Climate and Sustainability measures throughout the organisation.

Executive Summary

The Government's Climate Action Plan (CAP24) 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. A Public Sector Climate Action Mandate now applies to Limerick and Clare Education and Training Board which requires the ETB to put in place a Climate Action Roadmap to reduce greenhouse gas (GHG) emissions by 51% by 2030 and increase the improvement in energy efficiency from the 33% target in 2020 to 50% by 2030.

The Government's Climate Action Plan 2024 and the Climate Action and Low Carbon Development (Amendment) Bill 2021 is 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. Energy policy and directives such as the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED) are being updated under the European Green Deal and will transposed into Irish legislation and reflected in the Irish Government's annual updating of the Climate Action Plan.

This Roadmap forms an integral part of the ETB Estates Strategy in addressing our strategic objectives of achieving buildings that will be net zero by 2050. Set out below is the basis for the strategic vision and pathway to the ETB's delivery of energy efficiency and greenhouse gas emission reduction (GHG) targets:

- Our people
- Our targets
- Our way of working
- Our buildings (and vehicles)

Through this roadmap, the ETB not only aims to reach our Climate Action Targets but also embraces the challenge of leading by example to make the ETB a leader in tackling climate change. In this context, the ETB sets out to support an environment where students, learners and staff recognise that their individual and collective actions can have a real and positive impact on our climate future. Real engagement in terms of energy efficiency at ETB locations will positively impact on energy decisions in the home and in communities for years to come. This reinforces the ETB's responsibility as a statutory education and training authority to lead by example in engaging our students, learners and staff in improving energy efficiency and reducing emissions. The school sector climate action mandate broadly follows the wider public sector climate action mandate and both will be referenced in this roadmap.

This roadmap incorporates energy efficient measures to be implemented by the ETB while also considering measures to be carried out by the ETB's parent departments i.e. Department of Education (DoE) and Department of Further and Higher Education, Research, Innovation and Science (DFHERIS). It is also highlighted that the demand-led future expansion of the ETB to 2030 to deliver a wider range of services to a greater number of students and learners will impact on the targets as they are set out in this document. The creation of energy teams and innovation around reducing our use across the organisation is key in the implementation of in this roadmap. While it may be hard to quantify the impact, these initiatives will have on meeting kgCO₂ targets, the benefits gained will ensure that the ETB is playing a vital role in energy awareness within the communities it serves.

Limerick and Clare Education and Training Board's building stock includes Schools (Primary and Post-Primary), Offices and College of Further Education and Training Campuses. The shorter daily and yearly operating times of the majority of the ETB's buildings by comparison to standard office environments presents a challenge in reducing energy usage and also shortens payback periods on capital expenditure on energy upgrades. Addressing the gap to target for the ETB will be a very significant challenge and will require both capital and additional resources.

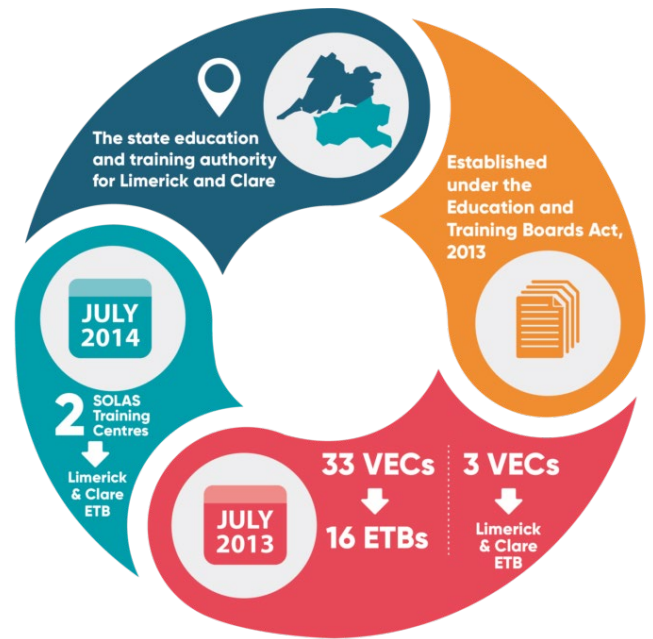


Figure 1 Progress to date

1. Introduction & Progress to Date

Organisational Context

Limerick and Clare Education and Training Board is the state education and training authority for the Limerick and Clare region in Ireland. It is one of 16 statutory regional education authorities established by the Education and Training Boards Act 2013. It was created following the amalgamation of three Vocational Education Committees, which provided post-primary, adult and community education in Limerick City, County Limerick, and County Clare since 1902. The authority was established on 1st July 2013 and assumed responsibility from SOLAS of two former Training Centres in Raheen, Limerick and Shannon, Co. Clare on 1st July 2014.



Limerick and Clare Education and Training Board delivers educational services to over 38,000 students and learners annually. The authority employs 2,500 staff. It has an average annual budget of €232m across all its divisions and its capital programme will see an investment in excess of €150m in the region over the next four years.

The authority has responsibility for: 20 post- primary schools & 4 community national schools, 2 outdoor education and training centres, co-ordination of youth work services in the region, 28 College of Further Education and Training Campuses, 3 Music Generation programmes and works with community groups in approximately 300 locations throughout Limerick and Clare.

Working closely with the Sustainable Energy Authority of Ireland (SEAI), our parent departments, DoE and DFHERIS, the ETB is committed to the necessary climate action to reducing greenhouse gas emissions by 51% by 2030. The newly renamed Climate, Capital & Estate Management Section coordinates the ETB's Energy Strategy and Management. This strategy includes the incorporation of Green criteria in all tender competitions, prioritising energy efficiency in capital projects, focusing on the increased use of green and renewable technologies and optimising opportunities to decrease the use of fossil fuels in heating the ETBs building stock.

While cognisant of the obligation to meet the Public and School Sector Climate Action targets, the raising of awareness about the importance of energy conservation is a key component of the ETB's approach in this roadmap. Energy Aware Campuses is an ETB initiative focused on maximising energy efficiency in all locations. This focus on energy efficiency and awareness will have positive benefits on the energy management behaviour of our students, learners and staff not only in their schools/ college of FET campuses and workplaces but also at home and within communities across Limerick and Clare.

In order to maximise the relevance and accuracy of this roadmap, Limerick and Clare Education and Training Board completed energy audits on 32 buildings in the first half of 2023. These audits provide a baseline of data to understand the energy efficiency of our building stock, the thermal performance of the buildings, the operation of the buildings in energy terms and enables an assessment of what has changed since energy audits were previously undertaken in 2015/2016. The Register of Opportunities (ROO) derived from these Energy Audits establishes the critical path to achieving the required savings and forms the basis for the Energy Roadmap to 2030. It is envisaged that active Energy Teams across all Schools, College of Further Education Campuses and Offices will proactively engage in implementing energy awareness and energy efficiency measures. The ETB's Climate Action and Sustainability Champion (C&SC) along with the Energy Performance Officer (EPO) will drive the energy agenda at a senior level to ensure the commitments made in this roadmap and all future editions are met. The impacts of Climate Change and the ETB's Energy Management Policy have been acknowledged as threats to the organisation and have been included in the quarterly review of the ETB's Risk Register. Climate Action and Sustainability is now a standing item on the Senior Management Team Meeting Agenda.

Progress to date

The ETB's Roadmap builds on the organisational commitment to implementing an effective energy management and reduction programme which has involved ongoing efforts to decrease energy usage and enhance the efficiency of the ETB buildings. The various measures undertaken to date are summarised below:

EEEEF Technical Assistance Fund

In 2014, Limerick and Clare Education and Training Board secured European funding for Technical Assistance from the European Energy Efficiency Fund (EEEEF). This funding was used by the ETB to carry out energy audits on all building stock, deliver training and an energy awareness campaign to all staff, students and learners and to develop a register of potential energy retrofit projects. This resulted in the establishment of Energy Teams in every location across Limerick and Clare while an understanding of the energy performance of building stock was developed. A detailed capital expenditure budget was established which clearly sets out the level of investment needed across the organisation.

One of the outcomes of this project was demonstrating that investment in education buildings is unattractive to the market due to the long payback periods. Education buildings in the main have shorter opening hours and days throughout the year. For this reason, the ETB could not attract the necessary investment to implement the identified potential capital programme. However, the lessons learnt have proven invaluable in terms of the database of information accrued, the understanding of the scale of the challenges to be faced and establishing a list of potential future projects to be undertaken if and when funding becomes available.

Better Energy & Sustainable Energy Communities

From 2017-2019 the ETB availed of significant capital investment for energy saving upgrade projects under SEAI's BEC and SEC Programmes. This involved carrying out projects on twelve buildings covering lighting, fabric and heating upgrades. These projects were matched funded by the ETB.

National Pathfinder Programme for Schools

The National Pathfinder Programme for Schools is delivered by the Department of Education and SEAI and is focused on the roll out of a deep energy retrofit programme to schools nationwide. Since 2017, the ETB has participated in the management and implementation of this programme at the DoE's request. 62 schools have been retrofitted under this programme across the country to date with a further 14 schools included in the programme for 2024. Active participation at a strategic level in the Pathfinder Programme has greatly enhanced the ETB's understanding of the retrofitting requirements in a school building context.

FET Pathfinder Project

Limerick and Clare Education and Training Board is collaborating with SOLAS and DFHERIS in 2024 on a Pathfinder programme for the Further Education and Training (FET) Sector. Starting in 2025 it is hoped that a building in our College of Further Education portfolio can be the recipient of an extensive deep retrofit.

RePowerEU Project

As a result of energy market disruption caused by Russia's invasion of Ukraine the European Commission aim to phase out Russian fossil fuel imports through the REPowerEU project. The Department of Education have been successful with their application for funding under the Repower EU Scheme. The DoE requested that Limerick and Clare Education and Training Board act as client and administration lead for the surveys on this €81 million project for the 40 participating schools. The selected schools will avail of a deep retrofit that includes the installation of Heat pumps, MVHR and fabric upgrades with an objective of achieving BER rating of B or higher.

Reduce Your Use

In 2023, the ETB set up Pilot Energy Teams in 5 locations. There was also a Teams channel set up for communication between the energy teams. Utilising documents developed by SEAI and OPW, the ETB rolled out a 'Reduce Your Use' campaign to those locations during the winter months. Monthly themed resources invited staff, students and learners to shut down at holiday time, switch off lights and electronic devices and generally increase energy awareness. There was also communication issued to all staff regarding shutting down and switching off at regular intervals throughout the year and especially leading up to closures such as bank holidays.



Figure 2 Reduce Your Use poster

Pilot Energy Management System

The Climate, Capital & Estate Management section is researching the possibility of introducing an Energy Management System (EMS) in a Pilot location within the FET building stock. This would mean the introduction of meters to monitor the energy usage of the building and to have access to real time data so that we can optimise the energy usage and minimise the waste. We are engaging with service providers of this technology to pilot in a FET campus. Dependent on the results of the pilot this technology may be rolled out to further locations should budgets allow.

Climate Action Steering Group

Positive climate action changes demand engagement from all aspects of an organisation and the ETB recognises this by creating a climate action steering group focused on reducing our GHG emission targets. The climate steering action group comprises of representatives of all sections from our organisation, including Directors, Heads of Section, School Principals and FET Campus Managers. Quarterly meetings are conducted to help influence and communicate awareness towards our climate action objectives. The steering group is supported by the newly created Climate, Capital & Estate Management section.

Senior Management Climate Leadership Training

As part of the ETB commitment to reducing our emissions seven staff members (CE, Directors and key organisational staff) have engaged with the institute of Public Administration Climate Action Leadership Programme. The ETB believe it will be at the forefront of Ireland's transition to a carbon-neutral and sustainable society and economy. This programme provided the ETB with a clear description and analysis of the climate action challenge and of the relevant laws, plans, and ideas in the coming years.

SEAI Accelerator

The ETB completed the SEAI Engaging People Programme in conjunction with the behavioural economics unit. The programme allowed our organisation to identify our current barriers, potential target audience and increasing our energy efficiency behaviour. The ETB now has a strategic and action plan which give a commitment to our goals and objectives of launching our own energy savings plan, "Make a Switch".

Make a Switch

Limerick and Clare Education and Training Board's launched its 'Make a Switch' competition between the ETB's Schools. The focus is on Climate Action and specifically around the 3 Rs-Reduce, Reuse, Recycle. The ETB is aware the Climate Crisis is a big challenge for organisations and people all around the world but we can all do something to help even at our local level and especially within our schools. To demonstrate the ingenuity and innovation of Limerick and Clare Education and Training Board students, we are setting a challenge for our cohort of school students. Student groups participate by entering a project as a class/year group. The campaign has been launched to look at sustainability measures where applicable but must improve something in the school building and not just the external environment. An outcome of the competition is hoped to be initiatives that can be replicated in other buildings in ETB buildings.

DECO2 – De carbonisation Co2 Project

This European Union funded pilot project based across 3 locations, Spain, Austria and Ireland. With our partners at TUS, we have chosen the College of FET, O'Connell Ave Campus to install a functioning intensive green roof to be used for training, research & testing purposes. Using the campuses gymnasium as the testbed, it is hoped that it can determine the energy performance of the existing structure whilst testing the thermal conductivity of various bio-based insulation materials.

Schools Solar PV

The ETB has been included in the second phase of the Department of Education Schools Photovoltaic Programme. Under this scheme the ETBs primary and post primary schools will benefit from 6kWp of roof mounted solar PV and monitoring system.

Green Teams

The ETB launched its pilot Green Teams initiative this year. The pilot was focused on 1 Post Primary School, 2 FET Campus and 2 Admin offices so that teams could advocate for good environmental practices. The Green Teams promoted and encouraged energy saving measures, raised awareness around sustainability while acting as a contact on a local level for staff to encourage new sustainable measures within their buildings. The positivity of the Green Teams is another step forward for the ETB in our journey towards our 2030 & 2050 targets.

Green Devolved Capital Allocation (Green DG)

The Green Devolved Capital Allocation fund will enable the ETB to take targeted measures to close the gap-to-target and make progress in achieving our Climate Action objectives. The fund allocation will help support our College of FET campuses efforts to improve energy performance and reduce emissions in our buildings in line with 2030 targets as set out in the Public Sector Climate Action Mandate. This decarbonisation funding is ring fenced for the next 3 years and will allow the ETB plan for the delivery of extensive retrofits and fabric upgrades across our College of FET campuses.

NZEB Training Facility

Limerick and Clare Education and Training Board has a strong and growing focus on Green Skills and Near Zero Energy Buildings (NZEB). There is significant ambition to continue to grow this provision in line with the national commitments set out in the Housing for All Strategy and the National Recovery and Resilience Plan. Training currently consists of training in NZEB fundamentals, Retrofitting, External Wall Insulation, Air Tightness and Vapor Control, Thermal Insulation Installation and Ventilation. This will be further enhanced via upskilling courses in Solar and Heat Pump Technologies in 2025. The Green Innovation Campus will offer training to approximately 1,500 learners annually. It provides skills training for individuals who are unemployed and for individuals in employment wishing to upskill. Over 1000 learners attended these courses in 2024. The development of the new Construction Bay was completed at the campus in order to grow this provision in line with the national commitments set out in the Housing for All Strategy and the National Recovery and Resilience Plan.

Green Public Procurement

In line with our commitments towards green procurement the ETB has included environmental and social considerations in line with Green Public Procurement Strategy and Action plan 2024-2027. The ETB is committed to only purchasing goods and services that measure up to the best practices and standards for environmental and sustainable materials. Throughout our procurement process and when engaging with suppliers we are cognisant of our obligation to the circular economy principles of Reduce, Re-Use, Recycle. With that in mind our procurement aim is to promote green procurement policies within our organisation whilst communicating our ETB goals with our suppliers.

Performance to date against 2030 targets

The following figures, produced by the SEAI's Monitoring & Reporting tool (M&R), demonstrate the performance to date of Limerick and Clare Education and Training Board in respect of the key Climate Action Metrics:

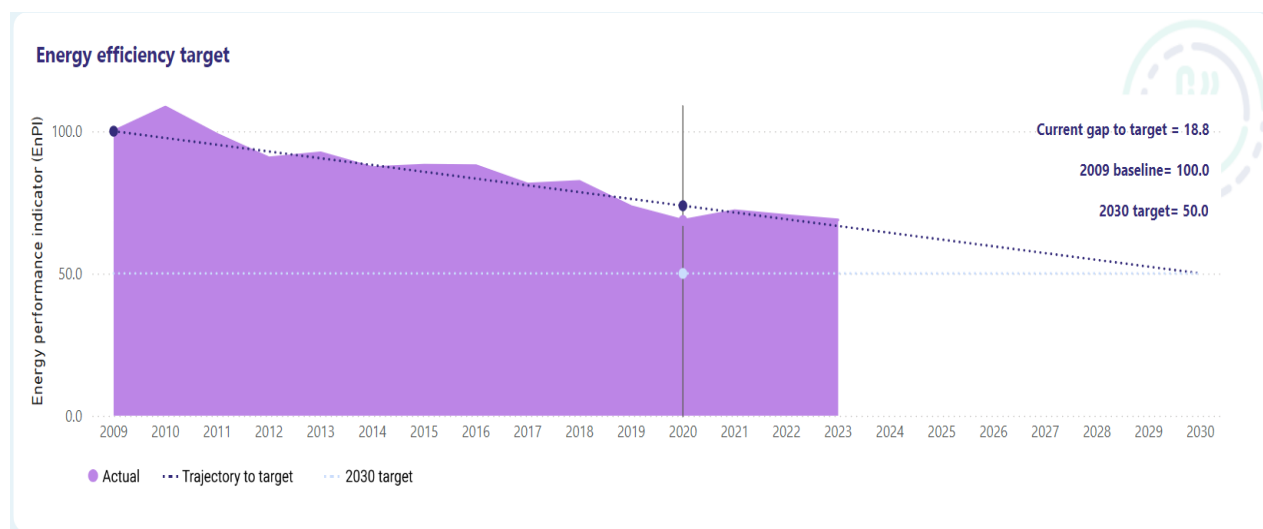


Figure 3 Energy Performance from 2009 Energy Efficiency Baseline to 2023

As outlined earlier in the Roadmap, the ETB was established in 2013 with the Education and Training Board Act amalgamating three former VECs, City of Limerick, County Limerick and County Clare. This meant the gathering of data and merging of information for the M&R tool on energy usage was a significant challenge. The inclusion of two Training Centres under the umbrella of the ETB in 2014, presented a further body of work to ensure all information was being captured accurately. With ongoing expansion to respond to the ever-increasing demand of the ETB's services in future years comes more challenges to ensure our gap to target decreases year on year.

In this context, the 2009 baseline shows that a significant improvement has been achieved in energy efficiency to the end of 2023. The glide path above shows the gap to the 2030 target for the ETB. Considering that the ETB was not established until 2013 and taking on board the expansion of the range and quantity of education and training services provided in the meantime, this is no small success. The ETB is now faced with the challenge of a 18.8% improvement by 2030 if the organisation is to meet its Climate Action Target, notwithstanding that the national programme to decarbonise the grid will bring default benefits to the ETB in terms of availing of renewable energy sources between now and 2030.

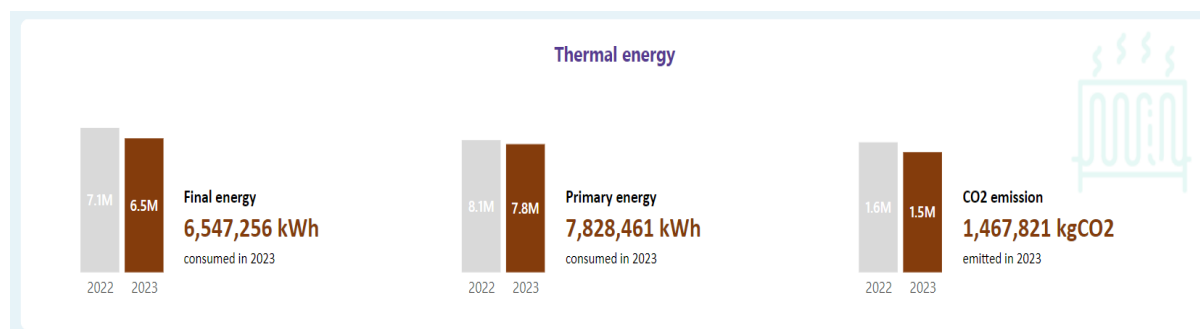


Figure 4 Thermal Consumption For 2022 and 2023

Number of ETB Employees(FTE)

Year	Number of ETB Employees(FTE)
2009	950
2010	950
2011	950
2012	950
2013	1000
2014	1200
2015	1200
2016	1250
2017	1350
2018	1550
2019	1350
2020	1550
2021	1700
2022	1900
2023	1800

Total Useful Floor Area (TUFA)

Year	Total Useful Floor Area (TUFA)
2009	105000
2010	105000
2011	115000
2012	115000
2013	115000
2014	115000
2015	120000
2016	125000
2017	130000
2018	135000
2019	138000
2020	140000
2021	145000
2022	155000
2023	150000

2. Our People- Leadership and Governance for Climate Action

Limerick and Clare Education and Training Board has significant responsibilities as a Public Sector Body delivering Education and Training Services to almost 40,000 Students and Learners across the Region to inspire and model best practice in tackling climate change. Project Ireland 2040 – National Development Plan 2021-2030, the Climate Action Plan sets out what must be achieved and this will be at the core of all the ETB's work now and in to the future.

Responsibility for implementing the strategy rests with the Senior Management Team consisting of the Chief Executive and the Directors of OSD, FET and Schools. A Director of OSD is the ETB's Climate and Sustainability Champion and Climate Action is now a standard item on every SMT Meeting Agenda. The focus across the organisation is on energy management and reduction of carbon emissions by means of a coherent strategy to gather the baseline data on which to set out the critical path for the ETB to meet its energy targets.



seai SÉIMEAR
SOLAS ÉILEICÉAN
SOLÁIS



Sealae na hÉireann
Government of Ireland

**To affirm its commitment to
decarbonisation of the public sector**

Limerick & Clare Education & Training Board

**Is a member of the SEAI Energy
Decarbonisation Partnership Programme**

We commit us

1. Work with SEAI to achieve net zero 2022 and 2030 energy decarbonisation targets set out in the wider Public Sector Mission.
2. Invest in energy management programme opportunities to the best of our capabilities.
3. Creating a management plan to achieve 2030 energy management targets and plan the specific measures to achieve net zero by 2030.
4. Review annually our progress and to building stock energy performance.

5. Work with SEAI to undertake a sector wide energy efficiency audit and energy decarbonisation action plan.
6. **Engage in energy efficiency and green building measures to reduce energy use by 50%.**
7. Consider **energy efficiency and green issues** in relation to all new planning and building projects and facilities.
8. Collaborate with SEAI to understand the **sources of energy-related climate action.**

Liam Hill

WM Mayor
CEO Sustainable Energy Authority of Ireland

15/04/2023
(date)

George O'Gallagher

George O'Gallagher
CC Limerick and Clare ETB

15/04/2023
(date)



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While the SMT plays a critical leadership role, Energy Management is the responsibility of all across the ETB including students and learners, staff and incorporating management at all levels across the organisation. Critical to this is supporting sections of the organisation and individuals to champion the energy agenda and ensure energy efficiency is always at the top of the agenda.

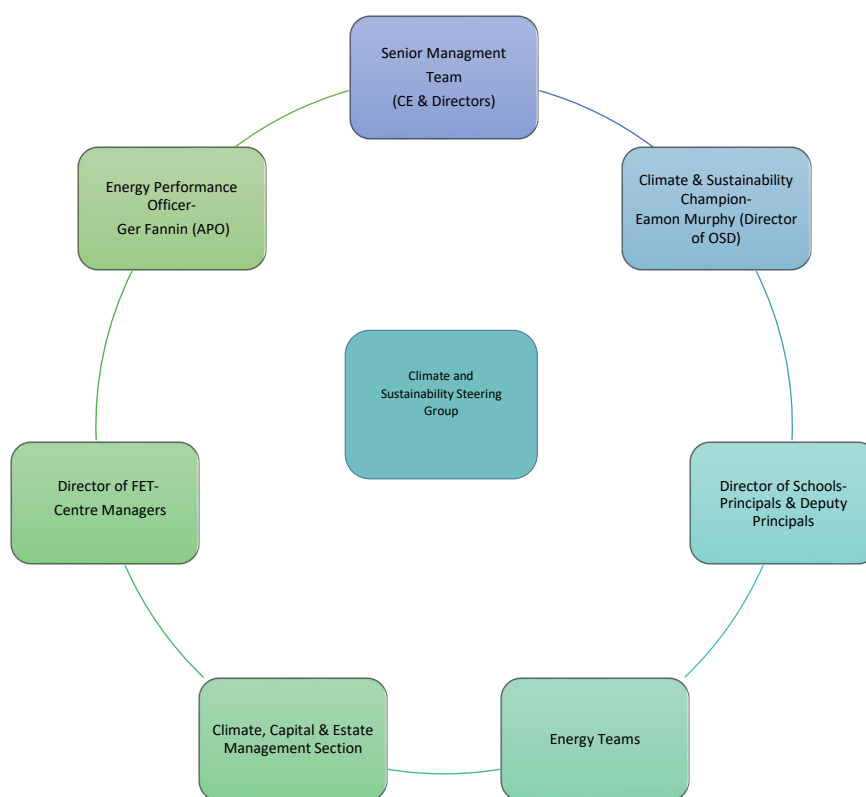


Figure 7 The ETB Energy Chart of Responsibility

Nominated Climate and Sustainability Champion

The nominated Climate and Sustainability Champion (C&SC) for the ETB is a Director for Organisational Support and Development (OSD) overseeing the implementation of the ETB's Public Sector Climate Action Mandate Roadmap. The C&SC will report to Senior Management on progress being made.

Governance Structure

The Energy Performance Officer (EPO) is the Head of the newly renamed Climate, Capital & Estate Management section, this section coordinates the Energy agenda across the organisation. The EPO will play a critical role in progressing the ETB towards its 2030 and 2050 Climate Action targets. In driving the ETB's energy strategy, the section provides resources and guidance to Energy Teams, ensures Green Public Procurement is adhered to and manages capital investment in projects to address energy efficiency in building stock.

Climate Action Steering Group

As set out in the ETB Strategy Statement, the ETB is focused on providing good governance and supporting frameworks. The newly created Climate Action Steering group will have the responsibility to implement actions from this roadmap, offer guidance and also influence any upcoming sustainable and climate action projects. The Climate Action Steering group comprises of representatives from a cross section of our organisation, including Directors, Heads of Section, School Principals and FET

Campus Managers. The steering group is supported by the newly created Climate, Capital & Estate Management section.

M&R returns

The Climate, Capital & Estate Management section coordinates and submits Monitoring and Reporting on energy usage annually for all ETB locations. The data required is collated from January of the relevant year for initial submission by Q2 2024 and further data submitted in Q4 2024. Reporting for 2024 involved the collation of data on Vehicles, Buildings and Energy Projects.

Make a Switch Campaign

In November 2024, the Climate, Capital & Estate Management section introduced a Reduce, Re-use, Recycle competition for Post Primary Schools called “Make a Switch”. The aim of this initiative is to encourage innovation while raising awareness in our schools about Climate Action and Sustainability. The competition will run until April 2025 where a winner will be announced and the projects will be circulated around the organisation as exemplar initiatives. The hope is that this competition will become an annual project that schools can build on year on year.



Figure 8 Make a Switch competition

3. Our People- Engaging our Staff

Staff Training, Climate Action & Sustainability Workshops

Energy Teams will be given resources and support to roll out a Reduce Your Use campaign for College of FET Campus from October 2024 to October 2025 addressing energy conservation.

Limerick and Clare Education and Training Board will also encourage schools and FET Campuses to participate in SEAI's Energy in Education courses during the academic year 2024-2025 and in subsequent years.

Sustainable Development education through the school curriculum will be supported by the ETB and a sustainability policy statement for all schools will be compiled. Several FET staff have already undertaken micro-credentials in 'Environmental Sustainability.'



Figure 9 UN Sustainable Development Goals

The Education for Sustainable Development (ESD) Newsletter has been subscribed to and will be circulated to all energy teams.

Staff, students and learners will be given the opportunity to carry out their own energy saving initiatives and share their experiences with other locations. This is being supported through the Make a Switch Campaign in schools.

Safe Routes to School Programme will be supported by the ETB for all schools.

Planning is underway for an ETB driven Climate Action Awareness Day. This will be an opportunity to share the work that is happening throughout the organisation regarding energy efficiency and focus minds on what everyone can do locally in their own locations.

This Climate Action Awareness Day and workshops can be expanded to the schools and FET Colleges once the Energy Teams are established and sufficient training has been provided. This is a goal for 2025.

As part of induction courses for new staff members, energy will be a topic and practices and responsibilities will be outlined. This will come into effect in 2025.

The Climate, Capital & Estate Management section are exploring the possibility of a computer shutdown with the IT section. This initiative would see all computers and displays turn off a set time during the week and the weekends.

Green Public Procurement (GPP) training will be scheduled for ETB staff and other procurement officers in 2025 and training on the GPP Tool has already been availed of by the ETB staff.

Climate, Capital & Estate Management staff have engaged with School Principals, Deputy Principals, TY Co-ordinators and College of FET Campus Managers to raise awareness of the ETBs obligations to meet our Climate Action and Sustainability goals.

Senior Leadership Training

Some Limerick and Clare Education and Training Board staff have successfully completed SEAI's Energy Management Training.

As per the Climate Action Mandate 2023, members of senior management (P.O. level or equivalent and above) and key staff have completed the IPA Professional Certificate in Climate Action Sustainability Reporting course in 2024. This was a tailored course addressing the modules advised by Minister Eamon Ryan in his letter of 29th June 2023.

4. Our Targets

The SEAI's Gap to Target tool (GTT) is the most effective way of showing the journey the ETB must go on to reach its Climate Action Targets. Using the data reported by the ETB on the Monitoring and Reporting system (M&R), the GTT shows the improvements in carbon emissions to date and also the progress required by 2030.

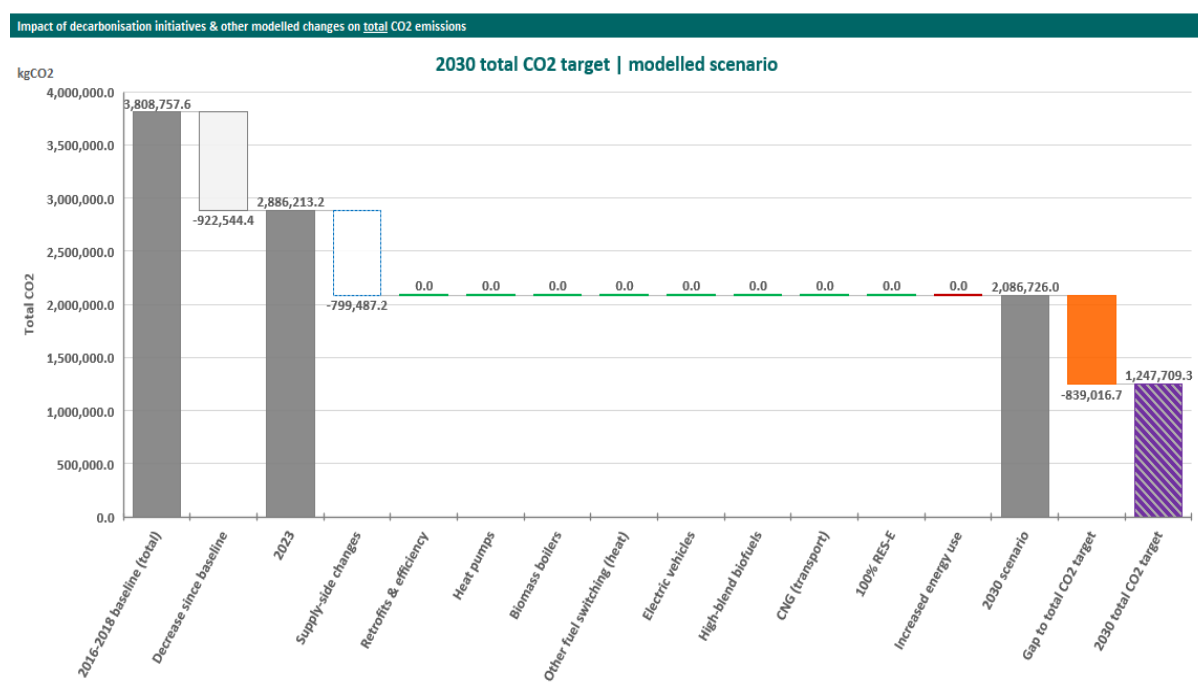


Figure 10 The ETB Total GHG Emissions 2016-2022 and gap to 2030

The graph above demonstrates the ETB's baseline for total emissions (2016-2018) was 3,808,757.8 kgCO₂. Progress to date (2023) shows a reduction in total emissions to 2,886,213.2 kgCO₂. It is forecast that as the electricity grid is decarbonised emissions will reduce outside of any reductions achieved by the ETB by 799,487.2 kg CO₂. The maximum total emissions that the ETB can produce by 2030 in order to meet Climate action targets is **1,247,709.3 kgCO₂**. In order to reach this target for overall emissions the ETB must reduce its usage by **839,016.7 kgCO₂** by 2030.

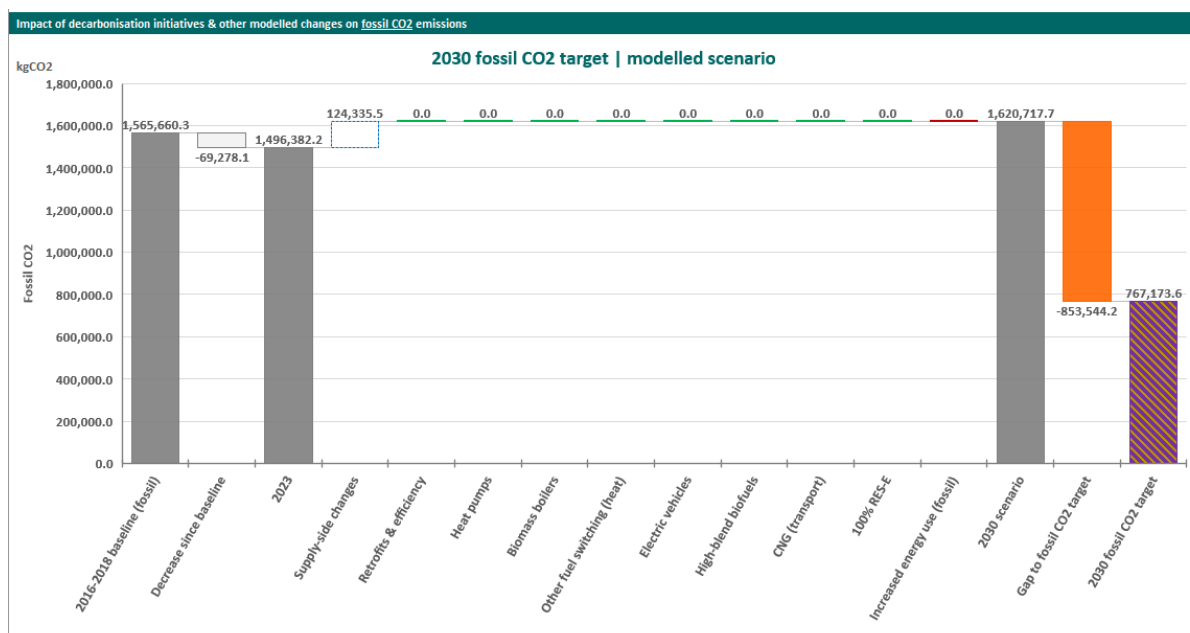


Figure 11 The ETB non-electricity GHG emissions 2016-2022 and gap to 2030

The graph above demonstrates the ETB's baseline for non-electricity GHG emissions (2016-2018) was 1,565,660.3 kgCO₂. Progress to date (2023) shows a decrease in non-electricity GHG emissions to 1,496,382.2 kgCO₂. The maximum non-electricity GHG emissions that the ETB can produce by 2030 in order to meet Climate action targets is **767,173.6 kgCO₂**. In order to reach this target for non-electricity GHG emissions the ETB must reduce its usage by **853,544.2 kgCO₂** by 2030.

One of the key challenges for the ETB is to select projects to address the gap to our kgCO₂ targets. As a starting point the ETB embarked on a procurement process in Q1 2023 for Energy Consultants to carry out Energy audits on thirty-two of the ETB Schools, FET Campuses and Offices. The audits were completed over summer 2023 and all reports completed by September 2023. From these SI 426 reports, the ETB has compiled a register of opportunities of energy efficiency projects. This register will inform what projects will advance the ETB to its targets. (Audits on leased buildings or on buildings already achieving an A3 energy rating were not undertaken.)

In order to meet the required GHG emissions and energy reduction by 2030, the ETB must embark on a programme of deep energy retrofitting across its building stock. Many of the identified measures are common to the majority of the locations so there are definite opportunities to maximise payback by amalgamating projects. In parallel, potential low/no cost solutions including, for example, the appointment of an Energy Champion (Team) in each location, installing time clocks on under sink water heaters and installing smart meters have been highlighted. At the other end of the scale, substantial capital investment will be needed to undertake fabric upgrades, decarbonisation of the thermal load, lighting upgrades, installation of renewable energy sources etc.

The Table below summarises the opportunities identified:

Location	Opportunities											
	Energy Champion	Check Meters- Smart-BMS Data loggers, water meters	Upgrade storage heaters to Farho ECO storage heating	Water heater under Wifi enable timers/smart control	Instal Kill switches for out of usage times	Upgrade internal lights to LED	Upgrade external lights to LED	Install Motion sensor to lighting	Full heating upgrade- oil boilers to LPG Gas, new pipework etc	Install storage heaters	Upgrade time control to heating-BMS	Upgrade windows with triple glazed
Glenroe Community National School	✓	✓										✓
Castletroy College, Newtown												
Coláiste Mhuire	✓	✓		✓	✓			✓	✓		✓	✓
Coláiste na Tríóaire	✓	✓		✓	✓	✓			✓	✓		✓
Desmond College	✓	✓		✓	✓	✓			✓		✓	✓
College of FET Ennistymon (Formerly Vocational School)												
Scariff Community College												
St Anne's Community College												
St John Bosco Community College												
St Joseph's Community College												
St Michael's Community College												
Thomond Community College												
College of FET, Abbeyfeale Campus	✓	✓	✓	✓	✓	✓			✓			✓
College of FET, Cappamore Campus	✓	✓		✓	✓	✓			✓			✓
College of FET, Croom Campus												
College of FET, Organic Campus/An tIonad Glas	✓	✓		✓		✓		✓	✓		✓	✓
College of FET, Ennis Campus												
Further Education and Training Centre, Hospital Campus	✓	✓				✓					✓	✓
College of Further Education and Training, Hospitality Campus												
Further Education and Training Centre, Kilmallock Road Campus												
Further Education and Training Centre, Kilmallock Town Campus	✓	✓		✓	✓			✓				
Further Education and Training Centre, Kilrush Campus												
Further Education and Training Centre, Scariff Campus												
Further Education and Training Centre, Shanagolden Campus	✓	✓			✓	✓	✓					✓
Further Education and Training Centre Watch House Cross Campus	✓											
Outdoor Education and Training Centre, Burren												
Outdoor Education and Training Centre Killinane	✓	✓				✓			✓			✓
Limerick and Clare Education and Training Board, Head Office												
Limerick and Clare Education and Training Board, Ennis Office												
Music Generation Limerick City												

Figure 12 Register of Opportunities from Energy Audits 2023

The identification of Limerick and Clare Education and Training Board's energy saving opportunities has enabled the use of SEAI's Gap to Target Tool (GTT) to determine how the organisation will meet its Climate Action Targets. The GTT takes data from the M&R system and shows the energy savings made to date by the ETB and also the 'gap' that remains to reach our targets. Inputting different projects and the resultant kWh savings into the GTT sets out a pathway to follow to 2030 and highlights where the necessary savings can be made. By putting projects together in different scenarios, significant energy savings can be realised.

Analysis of the Energy Audits has shown that the top energy saving opportunities range from heating system upgrades to window and lighting upgrades. From 2023 to 2030, the reality is that all opportunities will have to be taken to meet the ETB's targets. This will require considerable capital investment, capital investment that the ETB will not be able to meet own resources. DoE and DFHERIS Climate Action Plans and Strategies will be critical to the ETB. Other projects not currently identified and carried out during the intervening period will also have an impact on the overall strategy.

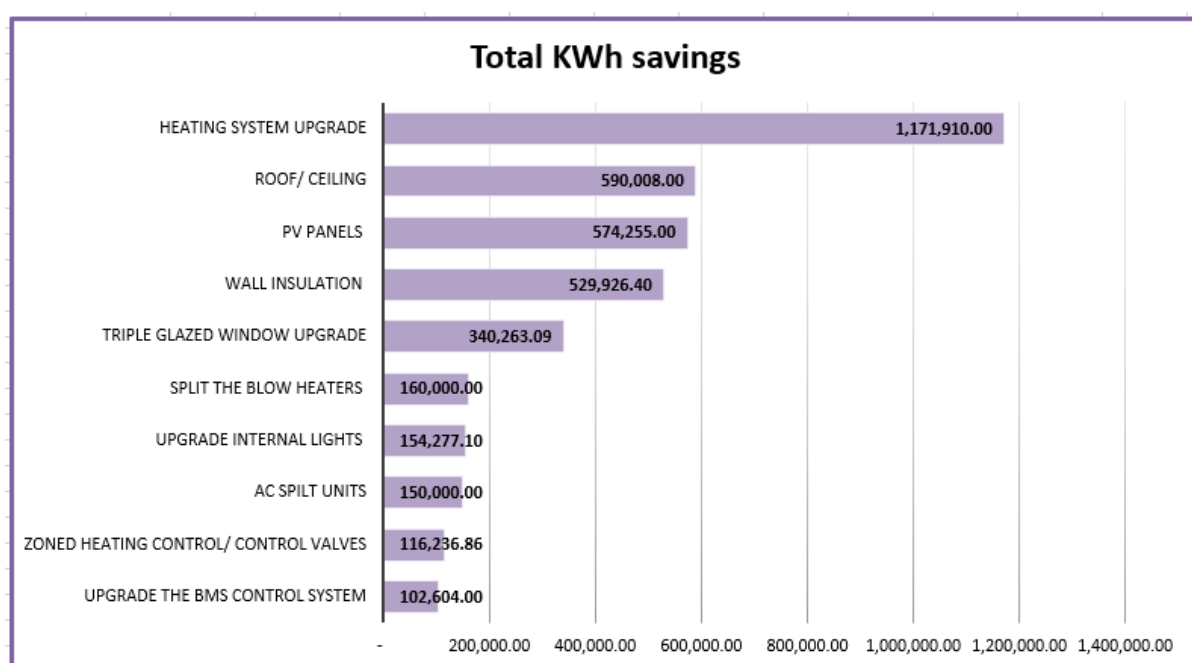


Figure 13 Top 10 Opportunities from SI426 audits

Regarding capital investment the estimated required spend on heating upgrades is circa €1.9m based on the SI426 audit reports. Estimated spend on window upgrades across the ETB is circa €1.85m and spend on PV panels (3-50kWp) is estimated to be circa €750,000.

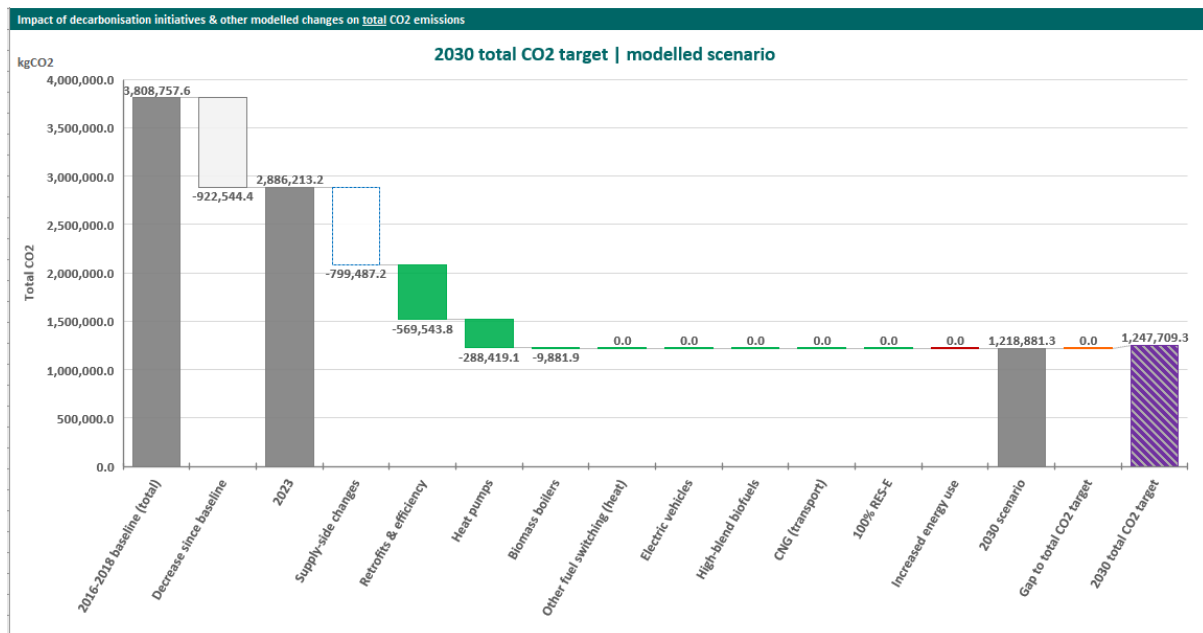


Figure 14 Modelled Totalled Emissions Target

It can be seen from the graph above that once the register of opportunities is inputted into the Gap to Target Tool, the total emissions target for the ETB is met and the gap is closed.

However, when looking at the non-electricity emissions target it is clear that the focus will have to be on decarbonisation for targets to be met. The majority of the opportunities identified in the SI426 audits must be carried out in order for the ETB's climate action targets to be realised.

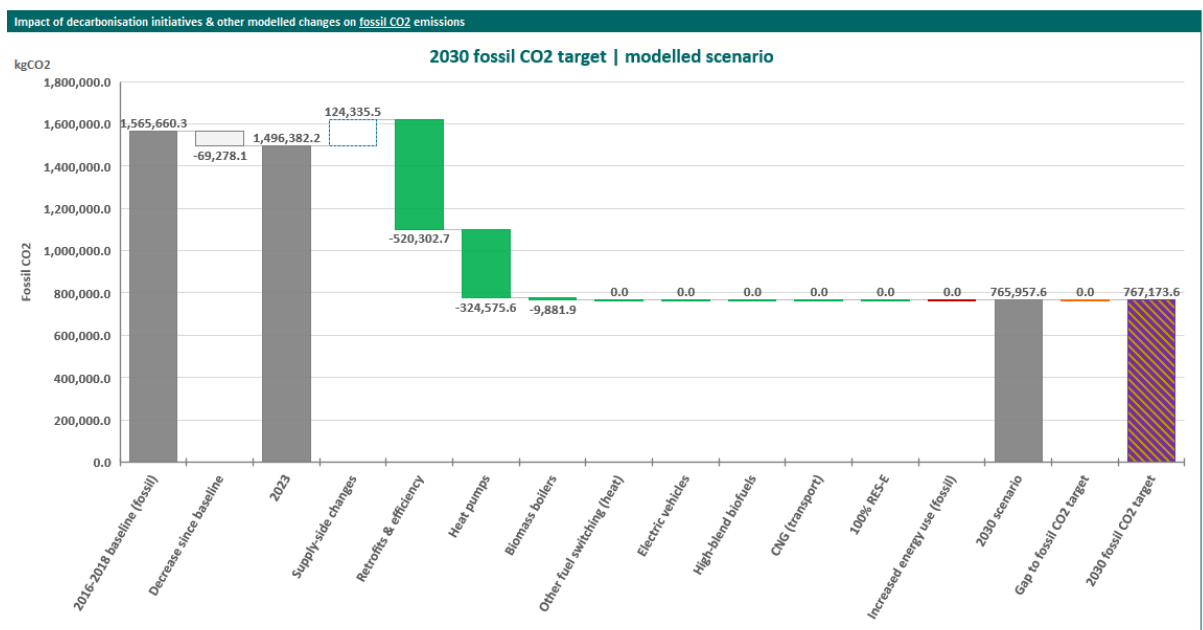


Figure 15 Modelled Non-Electricity Emissions Targets

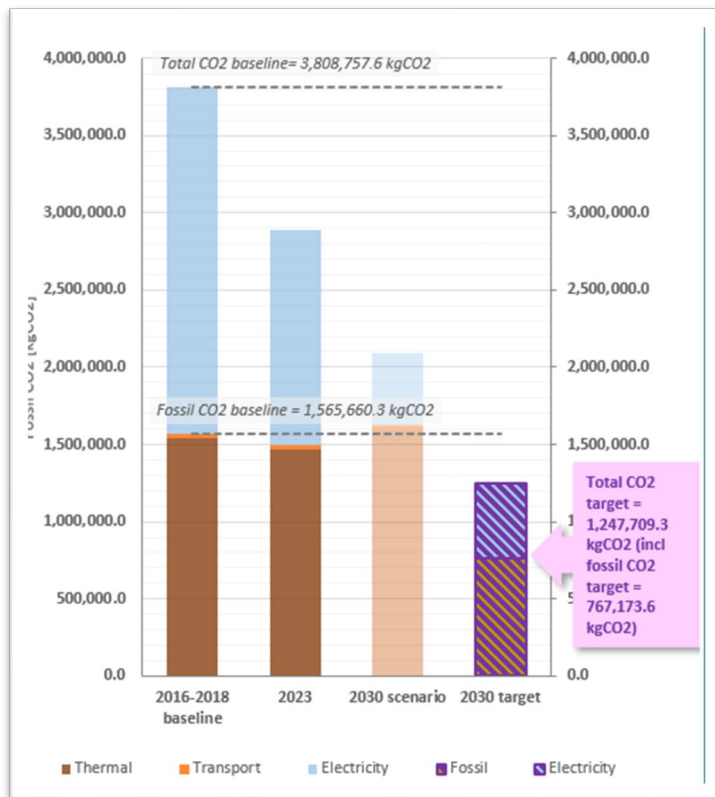


Figure 15 The ETB Gap to Target 2022-20230- Business as usual

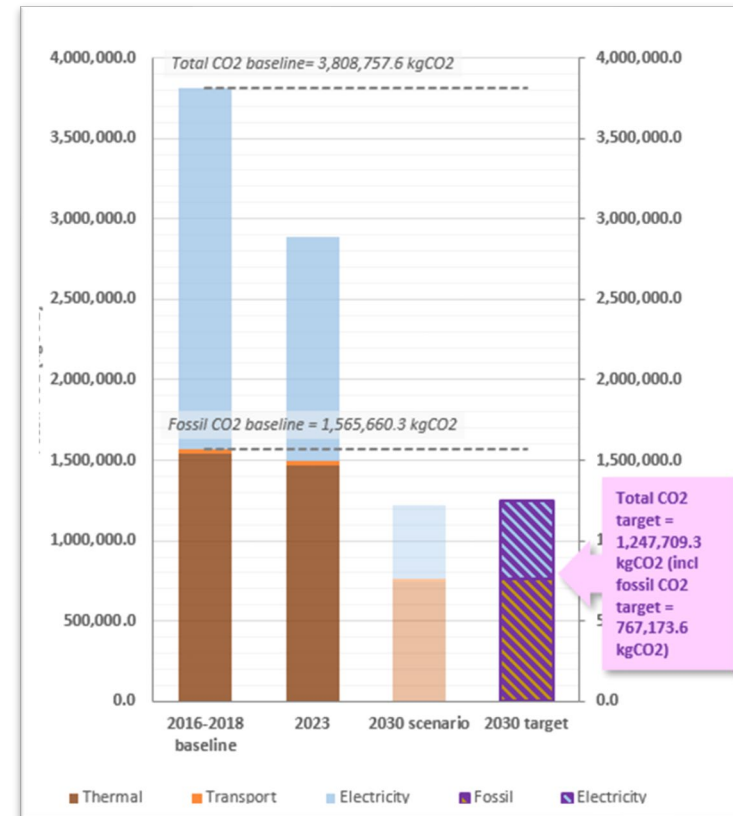


Figure 16 Limerick and Clare ETB Gap to Target 2022-2030- Modelled from SI426 Audits

The timeline for delivery of these projects is dependent on funding. Current and future sources of capital investment available to the ETB include inter alia Climate Action Summer Work Schemes, National PV Panels for Schools Programmes, National Biomass programmes, National Heat pump programmes, various SEAI Programmes, Emergency & Minor Works Schemes and Pathfinder Programmes for Schools and FET Campuses. The route to be taken for the ETB to reach its climate destination is clear. The establishment of Energy Teams in all locations is key to implementing no/low cost initiatives. Large capital investment is required to decarbonise buildings. A broad timeframe for delivery of these projects is shown in the timeline below. In tandem, the ETB has commenced work on a comprehensive Estates Strategy and difficult decisions will have to be made in the coming years on the viability of some the ETB locations that may no longer be required and not fit for purpose.

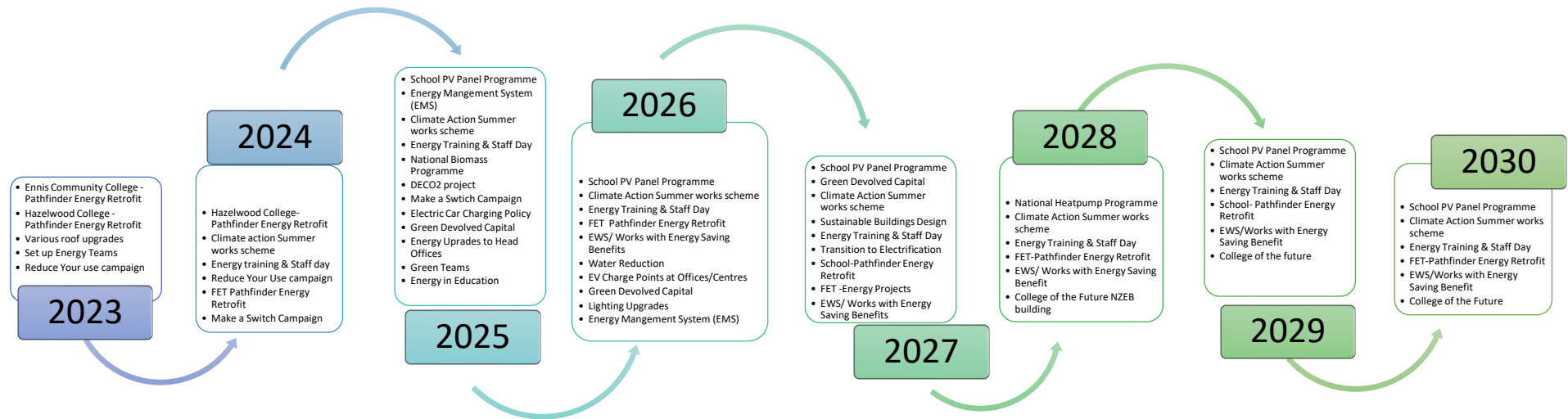


Figure 17 Actions to 2030

Challenges and Constraints in Meeting Targets

While it is clear what needs to be done, there are significant challenges to be met and constraints that may restrict Limerick and Clare Education and Training Board from meeting its climate action targets. Some of those challenges are outlined below.

Reporting on Travel

The ETB uses the M&R system to document all energy usage as a public body. The Climate, Capital & Estate Management section captures all energy usage across the ETB's building stock on an annual basis and this data is measured against the Total Useful Floor Area (TUFA) of our ETB. The collation of electricity and thermal usage, full time equivalent (FTE) of students, learners and staff and the TUFA of the ETB is a large task. One requirement of the M&R system is energy consumption in respect of travel and it is an area where the ETB needs further guidance and support. Data on staff travel is available on our financial system and this is submitted as part of our M&R returns. As an education body there are daily field trips, tours and trips to matches from all our schools and FET Campuses. Our learners regularly go to external classes and trips to support their courses. The M&R system requires travel to be inputted as litres of fuel. As the ETB contracts out bus hire to third party bus companies, with some minor exceptions, we are reliant on these companies to return the data required. Therefore, gathering the information required for student & learner travel on the M&R system, is very difficult as it is mainly outside of our control. There will have to be further guidance given to Public Bodies as to how to gather travel information and to identify what is to be included and what is to be excluded.

Timeline, Funding and Selection of National Projects

The timelines for when National projects such as PV panels for schools, Biomass upgrades, Heat Pump upgrades etc. are not defined. To plan for decarbonisation going forward is difficult as there are so many unknowns. The budgets and funding for grants for retrofits from DoE and DFHERIS are also not decided, so therefore it is hard to say as to what extent works can be carried out. Added to this, selection of projects for the various funding streams is a major factor on meeting our targets. There is a finite level of resources available at national level and the ETB is competing with other PSBs for access to these scarce resources. Addition of Green Devolved Grant has helped plan for future retrofitting projects in our owned FET buildings.

Resources

With Climate Action comes a significant workload and it is widely acknowledged that this arena of work is going to expand over the coming decade. Availability of sufficient staffing resources to undertake and manage the level of work needed will be critical to the success of this strategy.

On a macro level, there is a shortage of suitably qualified trained consultants and contractors to carry out Energy Efficiency projects. In an economy with full employment, there needs to be a focus on developing both skills and capacity in this sector. The ETB is already engaged in a key initiative with the development of an NZEB Centre of Excellence which delivers a range of training programmes which will both upskill and broaden the workforce needed to deliver energy projects. The FET Division via its College of FET Campus network is delivering green skills training across several modules e.g. Environmental Sustainability Awareness; Environmental Sustainability in the Workplace; Lean Practice for Sustainable Business; Resource Efficiency for a Sustainable Workplace; Circular Economy etc.

The ETB provides a broad range of education and training services to a diverse population across a large geographic area. Partnership is a key Priority Goal in the ETB's Strategy Statement 2022 -2026. The ETB commits to working in partnership with all Government Departments and Agencies, other Education Bodies as well as Industry and Community Stakeholders. This commitment is critical to Limerick and Clare Education and Training Board delivering on its roadmap – it cannot be achieved in isolation and a

coordinated approach to tackling climate change is absolutely critical. All PSBs will be seeking funding for the investment required and there is a limited amount of resources available.

Decarbonisation of buildings

While the plan for 2030 is to reduce GHG emissions by 51%, there is a longer-term target of being Carbon Neutral by 2050. It is now policy in the education sector to use renewable heating sources such as heat pumps in energy retrofits and new public buildings. Heat pumps cannot cater for 100% of a building's heating load and further research and innovation is required to completely eliminate the use of fossil fuels. This makes planning for zero carbon unpredictable and relies on future technology advancements which is outside of the ETB's control.

Transient Student/Learner Population

The ETB will be setting up Energy Teams in each location and these teams will be trained on monitoring energy usage and will conduct energy campaigns in their buildings. An integral component will be the inclusion of students and learners on these teams. This creates its own challenge as students and learners who may be trained on energy saving topics will inevitably progress through the school and FET College and leave the organisation. That means that new training will need to take place annually. The transient nature of the education environment means training will have to be updated and repeated on a regular basis. This will take up resources and time for the ETB.

Leased Buildings

The ETB has a substantial number of leased buildings in its property portfolio. The reliance on leased buildings poses considerable challenges in regards to M&R returns, Gap to Target and energy efficiency upgrade standards of our buildings. The requirement to lease only A3 energy rated buildings will place significant demands on the ETB's ability to find suitable localised accommodation in the future.

5. Our Way of Working

Energy and Environmental Management Systems

The ETB engages with SEAI on a continuous basis to remain appraised of any developments with regard to energy management systems and requirements and the ETB recognises the clear link between reaching our targets and embracing best practice energy management tools and systems. Categorised as a 'small' Public Sector Body, the ETB is not required to achieve formal environmental accreditation such as ISO 50001 (Energy Management Standard) or ISO 14001 (Environmental Management System), or to progress beyond ISO14001 to adopting EMAS (Eco Management and Audit Scheme). However, with the projected increase in activity between now and the end of the decade, processes and procedures will have to be streamlined in a suitable framework.

Digitisation of processes

The digitisation of work processes is ongoing within the ETB. As we evolve and adopt new software such as a new, bespoke Contract Management system there is less need for paper-based records. While auditing of files limits the transition to a completely paperless office, the vast majority of records across the organisation are stored digitally with the consequent reduction in the use of printing and paper. The COVID Pandemic hastened the transition of the ETB to implement measures such as remote working, online learning and meetings, cloud-based storage with positive environmental benefits accruing. It reduces the need for travel and energy usage. This unexpected turn of events propelled the ETB into advancing digital and ICT processes, again resulting in energy savings across the organisation.

Green Procurement

Green Public Procurement is mandated for all purchasing competitions within the ETB. Staff have engaged with GPP training to date with further training to be delivered in 2024. Centralised Public Sector Contracts put in place by the OGP all have GPP components. GPP is also now embedded in DoE & SOLAS documents and templates that the ETB uses for the appointment of Consultants and Contractors. Low carbon construction methods will be incorporated wherever possible. Where the ETB is in full control of the procurement of works, good and services, GPP and low carbon construction will be award criteria, shaping the 'greener' delivery of key investment.

Resource use

Minimising the use of scarce resources is integral to effecting real energy savings. Utilities Contracts including waste management, water, gas, electricity etc. are being closely monitored internally. There is an ever-increasing emphasis on monitoring of water and waste within the ETB. Central to this is the use of new and improving technology including BIM in building design, digital billing online, use of smart metering, accurate and real-time meter reading, BMS Systems etc.

Waste management contracts are managed centrally and regular meetings are held with the key account manager. Waste audits are ongoing with quarterly reviews in order to reduce waste. We are also requesting training around waste and information resources. Information around resource use will also be incorporated into the message to Energy Teams and also to new staff members in their induction to the organisation. The procurement of time clocks for water heaters, smart meters for electricity, thermostat zoning are all initiatives that will assist in the monitoring of resource use.

6. Our Buildings and Vehicles

Bicycle Friendly Building

While bicycle parking is provided as standard in all school building projects, an audit on bicycle parking was carried out in 2024 to identify gaps. Any locations without bicycle parking will be collated with a tender competition for provision of bicycle racks to follow in 2025. The Safe Routes to Schools Programme will be supported and delivered in the approved areas across the ETB.

Display Energy Certificates (DECs)

A tender competition for DEC's was carried out in Q1 2023 and the certificates were supplied to every ETB location by Q4 2023. We are currently undertaking renewal of these DEC's for all ETB locations.

Vehicles

The ETB are focused on purchasing zero-emission vehicles in line with the capability requirements for our organisation. A Business Case template for the purchase of vehicles is mandatory and the purchase of any new vehicle requires CE approval. A strategy for the roll out of EV charging points in all ETB buildings is being put in place.

Buildings

The challenge faced by the ETB in decarbonising our buildings is set out in this roadmap. In this context, the ETB is following the guidelines in the Public Sector Climate Action Mandate in respect of new heating systems. With all new buildings incorporating heat pump and MVHR technology the real focus is on existing buildings and eliminating the use of oil and gas.

Building Stock Plans

The ETB is preparing an Estates Management Strategy which will be very much focused on the long-term sustainability of buildings across Limerick and Clare. This strategy will benefit from the database of information compiled on the existing building stock retained by the C & P Section.

7. Our wider climate action plans

There is a real commitment across Limerick and Clare Education and Training Board to meet our responsibilities in tackling climate change. Climate change has been described as a ‘wicked problem’ as, while the need to change is great, the human instinct to keep doing business as usual is strong. It is a local, regional and global problem. Limerick and Clare Education and Training Board as a Statutory Education and Training Authority delivering services to almost 40,000 students and learners annually is in the position of being able to affect real changes in climate behaviour in our Communities. With active Energy Teams in all buildings the aim is to foster energy awareness and education around energy efficiency and the role we all play moving towards net zero for 2050.

Between now and 2030, the ETB has to achieve challenging targets in terms of decarbonisation and energy use. This roadmap sets down a path to attaining these targets. This strategy is based on an assessment of the real data charting the current performance of the ETB infrastructure and identifying the investment needed over the coming years. It is envisaged that energy research into new technologies to assist with meeting Climate Action Targets is advancing and while technological advancement may expedite achievement of targets, this roadmap identifies how the ETB can deliver what is required. Shifting goals regarding keeping the earth to 1.5° degrees means organisations have to be able to adapt. While a lot of these policies are outside of the ETB’s control, there is a lot that we as an organisation can do right now to educate and mitigate for future generations.