CIE

CIE Sustainability
Driving Change

CIÉ Group Sustainability Annual Review 2022

June 2023

Bus Átha Cliath
Dublin Bus

Bus Éireann

Iarnród Éireann
Irish Rail

CIE C·I·E TOURS

Contents

SECTION 1

Message from the CIÉ Group CEO

Providing a high quality, accessible public transport service supports economic development and social cohesion. It plays a critical role in addressing climate change, reducing congestion and improving air quality. As Ireland's largest public transport provider, our ambition is to be front and centre of Ireland's climate response, providing solutions for sustainable development across the country.

CIÉ Group, with the support of our key stakeholders the Department of Transport (DoT) and the National Transport Authority (NTA), plays a crucial role in delivering the objectives of the 2023 Climate Action Plan (CAP), which aims to reduce national greenhouse gas emissions by 51% by 2030, targeting decarbonisation of the transport sector through large-scale modal shift to public transport and active travel modes. The updated CAP targets a 130% increase in daily public transport journeys by 2030, which the CIÉ Group and the NTA are working to enable through the expansion of network services and the transition to low carbon and zero emission services.

The challenge to transform mobility and public transport demands sustained investment and technical innovation, to deliver services for a fast-growing population and shifting patterns of passengers and communities. Above all, it requires a commitment to leadership and action, to aligning our purpose to underpin Ireland's sustainable future, where economic and social prosperity can be decoupled from environmental impact. Recognising the unique role of the Group as a transport and infrastructure provider, in 2020 the CIÉ Group published our sustainability strategy setting out our commitments to sustainability, with commitments aligned to the United Nations (UN) Sustainable Development Goals (SDGs).

I am delighted to present our 2022 sustainability annual review, detailing progress on our commitments and a vision for the future. As we invest in an expansion of high-quality public transport services, we seek to break the link between emissions and growth and look for opportunities to invest in environmental regeneration and resource use efficiency.

In this review of 2022, we are pleased to report the progress achieved across the Group to shift our operations to a more sustainable business and to set out the plans for this transformation to be delivered over the coming years. In 2022, with the support of the NTA, work continued to progress the DART+ programme and the expansion of low emission bus services. Through DART+, Iarnród Éireann will expand the existing DART network, delivering tailpipe emission-free journeys across the Greater Dublin Area (GDA). On our city and regional bus networks, orders were placed for 120 double-deck battery-electric buses to be deployed in Ireland by Bus Átha Cliath and Bus Éireann, the first step of a planned introduction of 800 zero-emission battery-electric buses. Notwithstanding progress on this transition, migration to a zero emission network presents technical, resource, systems and operational challenges. This investment, along with implementation of energy management strategies across fleet and buildings is yielding improved energy efficiency and carbon management.

Sustainability is an integral part of CIÉ Group's strategy and in 2022 we took steps to fulfil this purpose by establishing a sustainability fund approved by the CIÉ Board. The fund supports delivery of strategy across the core three pillars of sustainability: economic, social and environmental. The first year of the fund provided funding for programmes to achieve our sustainability objectives.

Over the next decade, we are committed to transforming our services and operations into a low carbon, fully circular business. Across CIÉ Group significant progress is being made in the delivery of this multi-annual investment and sectoral transformation, which could only be achieved through collaboration and commitment across the CIÉ Group Operating Companies. With a renewed sense of purpose, we recognise the opportunity to use our position as a market leader to drive positive change among stakeholders and business, creating a climate resilient and sustainable transport network.

Lorcan O'Connor
CIÉ Group CEO

CIE Sustainability *Driving Change*

Over the next decade, we are committed to transforming our services and operations into a low carbon, fully circular business.

SECTION 2

Insights from our Chief Sustainability Officer

Over the course of 2022, sustainability teams across the CIÉ Group have worked together to deliver an ambitious climate strategy and sustainability agenda. While the scale of the challenge to decarbonise is significant, this is an opportune time for public transport to play a role in Ireland's climate response, improving connectivity for communities and people of all ages and across society.

With the NTA, we are working to deliver an expansion of high-quality transport services to act as a catalyst to modal shift and sector-wide emissions reduction. Over 2022, we laid the foundations for the planned transition to a low carbon network, which will make an impact emissions as urban and commuter bus and rail fleets progress to electrification and alternative fuels are trialled on hard to abate journeys. To support our decarbonisation strategy, the Group will set science-based targets commencing in 2023 and we are working with partners in the SEAI, NTA and DoT to create a glidepath for reaching our climate targets.

Future strategy for the Group will be defined by climate risks and opportunities; the balance is tipped towards strategic opportunity, with unprecedented investment in public transport enabling modal shift to sustainable transport modes. We are developing a comprehensive understanding of the probability and impact of climate risks and opportunities; putting in sharp focus the strategic and financial implications of the transition to a low carbon network, the physical risks of warming and the opportunities associated with climate change mitigation. Oversight on delivery of our commitments and strategy is governed by the CIÉ Board and the Board's Sustainability Advisory Group, whereby Group alignment on strategy and performance is monitored.

During 2022, we worked to build a culture of sustainability, supporting individual and team empowerment by providing education and skill development and opportunities for knowledge sharing. As we embed sustainability across functions, we are laying the foundation for employees to play a role and to deliver impact through an organisation of scale. In particular, CIÉ Group Operating Companies are working to create a culture of openness and inclusivity, boasting a multi-cultural workforce and a recruitment drive to achieve full gender equality and social inclusion. As our diverse workforces reflects a dynamic new Ireland, we have invested in capturing the unique heritage of the network, people, trades and services which have depended on the CIÉ Group since 1844. We seek to play a part in halting biodiversity loss and ecosystem regeneration. Managing a wealth of nature based assets across our extensive network, we are committed to the protection and rehabilitation of natural capital through 2023 and beyond.

In the 2020 Group Sustainability Strategy, we highlighted the need for collaboration across industry, community and stakeholders to tackle cross-sectoral challenges. In 2022 we have had the opportunity to work with best-in-class academic institutions, established industry players and government stakeholders, to facilitate commercial innovation and sharing of knowledge. With an unprecedented openness to work together, we are optimistic about playing a role in addressing Ireland's national challenges. I would like to highlight the work and commitment of the cross-Group Sustainability Steering Group and supporting teams, who are working towards a more sustainable and resilient future.

Caoimhe Donnelly
Chief Sustainability Officer

2023 Priorities

- Commit to setting Science Based Targets as part of Science Based Targets Initiative (SBTi).
- Continue to implement Green Public Procurement and engage with our value chain.
- Assess opportunities to align with the Taskforce on Nature-related Financial Disclosures.
- Commence EU Taxonomy reporting and prepare for reporting under the CSRD and TCFD.
- Implement energy efficiency projects across the Group, including microgeneration projects.
- Investigate circular economy improvements across the Group and reduce our waste generated.
- Progress Transit Oriented development projects across the Group's sites.
- Partner with external stakeholders to coordinate on climate action across Ireland.
- Accelerate deployment of new zero emission buses and continue the DART+ expansion.

SECTION 3

Who We Are

The CIÉ Group of Companies, including the CIÉ Holding Company, Bus Átha Cliath, Iarnród Éireann, Bus Éireann and CIÉ Tours, is the largest public transport provider in Ireland. In conjunction with the NTA, we operate bus and rail services across the country, connecting communities, enhancing mobility, and providing a sustainable transport option.

CIÉ Group of Companies:

Bus Átha Cliath Dublin Bus

- Public bus transport in the Greater Dublin Area
- Dublin City bus tour operator

Iarnród Éireann Irish Rail

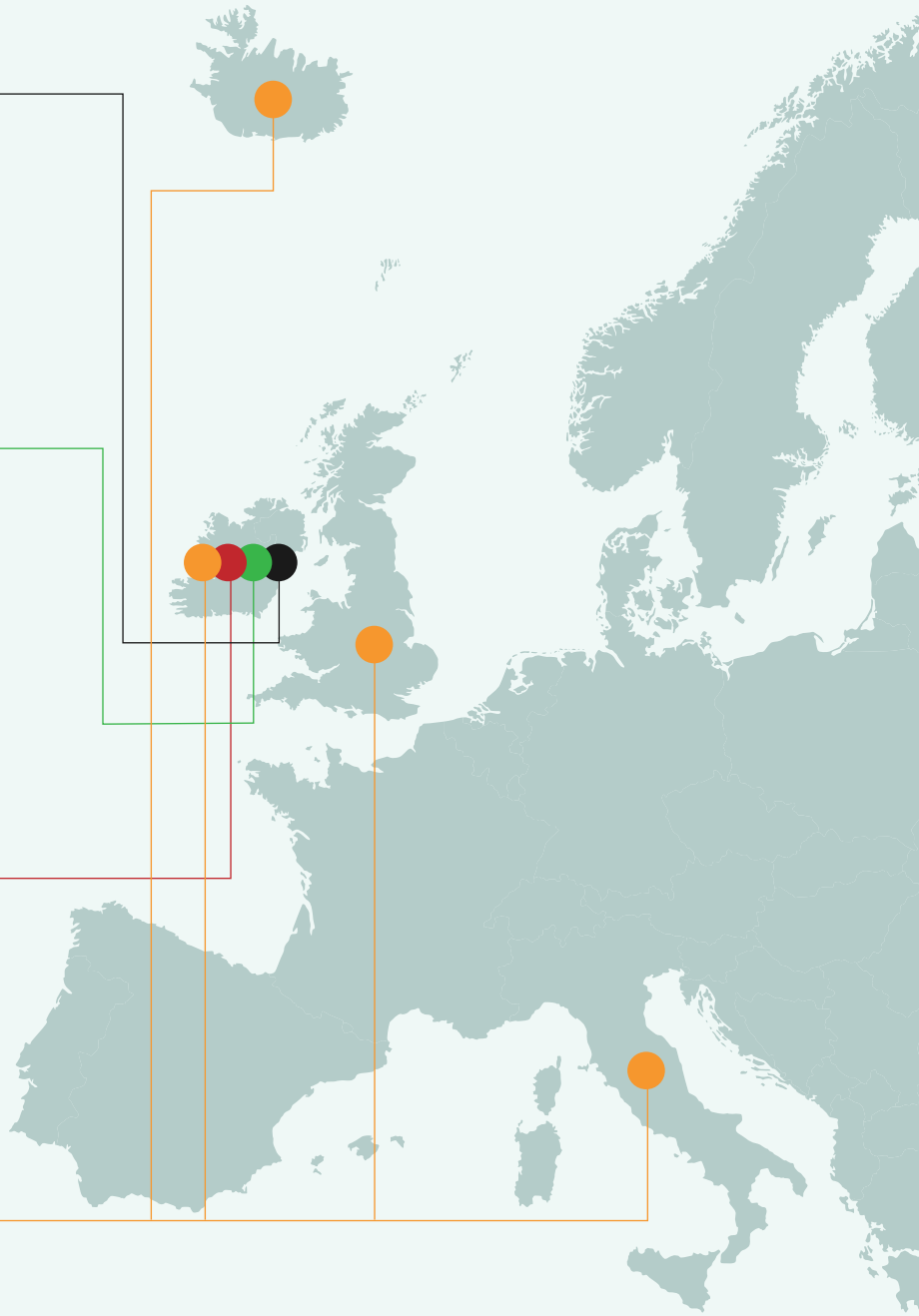
- Passenger rail transport
- Freight rail transport
- Port Authority for Rosslare Europort

Bus Éireann

- City, town, and provincial public bus services outside of Dublin
- Schools transport service
- 'Expressway' intercity bus services

CIE C·I·E TOURS

- Private tour package operator



Our Mission

As Ireland's largest public transport provider, our mission is to work alongside our stakeholders, the NTA and the DoT, to offer a high quality, low-carbon transport option, connecting communities, maximising accessibility, and supporting compact growth.

Our Vision

Together, with our passengers, partners, and communities, we are committed to transforming public transportation into a powerful force for positive environmental, social, and economic change.

Low Carbon Transport

Transform our bus and rail fleets to low carbon, zero tailpipe emission vehicles

Renewable Energy

Prioritise the adoption of efficient technologies and renewable energy sources

Responsible Resource Use

Promote the sustainable use of resources, safeguarding the environment for present and future operations

Inclusive Communities

Foster diverse and inclusive communities where every individual is valued, respected and empowered

Our Values

Partnership, Integrity, Effectiveness and Respect

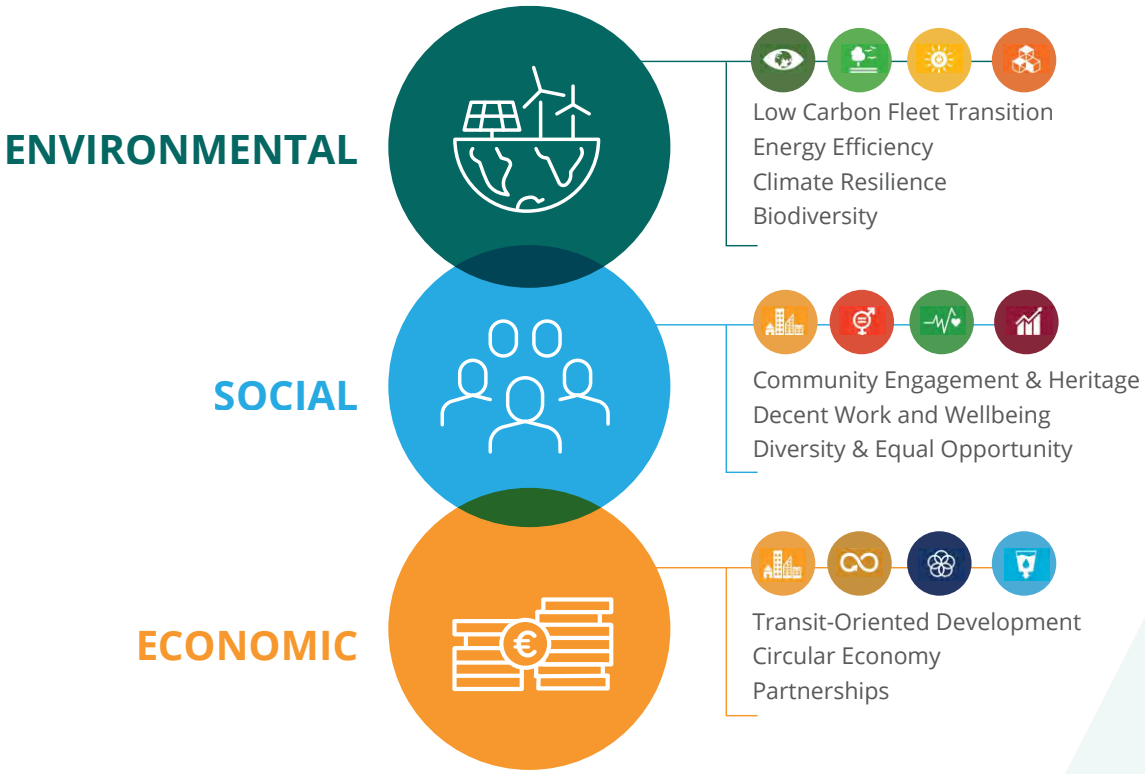
SECTION 4

Executive Summary

At CIÉ Group, sustainability is central to our strategic purpose. Our goal is to drive sustainable business, helping to meet the national targets set out in the Climate Action Plan 2023 and supporting the achievement of the UN SDGs.

The CIÉ Group sustainability strategy is a plan of action centred around the three pillars of sustainability: social, economic, and environmental. Our targets and sustainability initiatives are framed within ten action areas, including biodiversity, diversity and equal opportunity, and energy efficiency. To ensure a holistic and global view of sustainability we have designed our strategy to align with the UN SDGs and Irish and European Union (EU) climate policy.

We are committed to becoming a fully sustainable business, working to drive change across operations and the value chain.



THE GLOBAL GOALS

CIE Sustainability Driving Change

As Ireland's largest public transport provider, our mission is to work alongside our stakeholders, the NTA and the DoT to offer a low-carbon transport option, connecting communities, maximising accessibility, and supporting compact growth. CIÉ Group is working to offer high quality, frequent services to stimulate modal shift and provide a sustainable alternative to private car use across the country.

In December 2022, Ireland published its updated CAP 2023, which outlines a framework for delivering the Government's target of a 51% reduction in greenhouse gas (GHG) emissions by 2030 (relative to 2018) and a long-term target of reaching net zero GHG emissions by 2050. CIÉ Group plays an important role in delivering the objectives of the CAP and National Sustainable Mobility Policy by providing safe, green, accessible and efficient alternatives to car journeys. The CAP plans for a 130% increase in daily public transport journeys by 2030, which CIÉ Group is working to facilitate with support of the NTA through the expansion and upgrade of our networks via BusConnects, Connecting Ireland Rural Mobility Plan, and DART+.

CIÉ Group is taking action to meet our GHG reduction targets with a transition to low and zero emission fleet technology and the introduction of measures to mitigate and improve energy efficiency across operations. We are working with the NTA on the procurement of low and zero emission vehicles and are preparing stations and depots for the introduction of electric vehicles. Over the next decade, Bus Éireann and Bus Átha Cliath will gradually transition their fleets from diesel to zero tailpipe emission vehicles and Iarnród Éireann will add electric and battery-electric train carriages to their fleet.

CIÉ Group is also exploring the feasibility of increasing renewables in our energy mix. The shift from a low cost, flexible fossil fuel-based fleet to a zero emission service presents risks, opportunities as well as operational challenges. It will greatly increase our electricity demand and require a sustained investment and planned upgrades of stations and depots to support electrification.

CIÉ Group is exploring alternative technologies where electrification is challenged. We are supporting the development of green hydrogen in transport, working with partners to develop a hydrogen valley for Ireland. In 2021 Bus Éireann and the NTA deployed three hydrogen-fuelled buses in Ireland, providing insights into the use of hydrogen fuel cells as a complementary technology to battery electric vehicles under operating conditions.

There are challenges to improve building energy efficiency across the Group, but this also provides an opportunity to make an impact on CAP public sector climate targets. In 2022, feasibility studies and energy audits commenced in key locations across the CIÉ Holding Company, the results of which will inform future retrofit and energy efficiency projects. In parallel, we have commenced the installation of behind the meter, micro-generation of electricity across our buildings, with initial steps taken to implement sub metering and solar photovoltaic (PV) systems in key locations.

In 2022, the Group made progress towards improved circularity across our operations and value chain by introducing new circular initiatives and increasing the recycling rate across each Operating Company. CIÉ Group has also introduced targets for sustainable procurement through our Responsible Purchasing Policies, which were introduced across Iarnród Éireann, the CIÉ Holding Company and Bus Éireann in 2022.

Investing in biodiversity and developing natural capital is a priority for the CIÉ Group. We aim to nurture a symbiotic relationship with the biodiverse ecosystems across our rail and bus networks. The interface of rail and natural capital includes over 120 protected wildlife areas which we are committed to preserve. The Group continues to invest in biodiversity and over 2022, a number of projects were delivered in each Operating Company, with biodiversity gardens installed across key stations and depots. There are currently 47 train stations that have adopted pollinator programmes and plans to complete this programme across all 145 operational stations of the network by 2030. CIÉ Group is seizing the opportunity to protect the health of our ecosystems by instituting these biodiversity initiatives.

We prioritise engaging with our stakeholders and providing input on national policymaking for transport and sustainability. We are working with leading research and development institutions and policy makers to pool resources and expertise to enable the energy transition. CIÉ is partnering with University College Dublin (UCD) Energy Institute to co-design two targeted projects under the NexSys research programme that will investigate energy demand across the entire transport network in Ireland and the transition to zero and low emissions fleet technology.

Our sustainability strategy has an important role in delivering national development objectives. CIÉ Group has a significant property portfolio where we seek to enhance the public realm and drive modal shift by investing in transit orientated development (TOD). In 2022, CIÉ Group advanced planning for TOD in key regional and city locations, promoting high quality urban development around major transportation hubs.

A ten-year plan for delivery of flagship projects is in progress across the CIÉ Group, which will see the construction of approximately 5,000 residential units, retail, hotel and office space together at major sustainable transport hubs.

CIÉ Group and Iarnród Éireann continue to support the development of new Greenway trails on closed and abandoned railway lines across Ireland.

Our employees play a pivotal role in delivering our sustainability strategy. To build the expertise and empowerment, we are implementing specialised sustainability education for employees to help forge a culture of sustainability across the Group and sponsor employee-led sustainability initiatives.

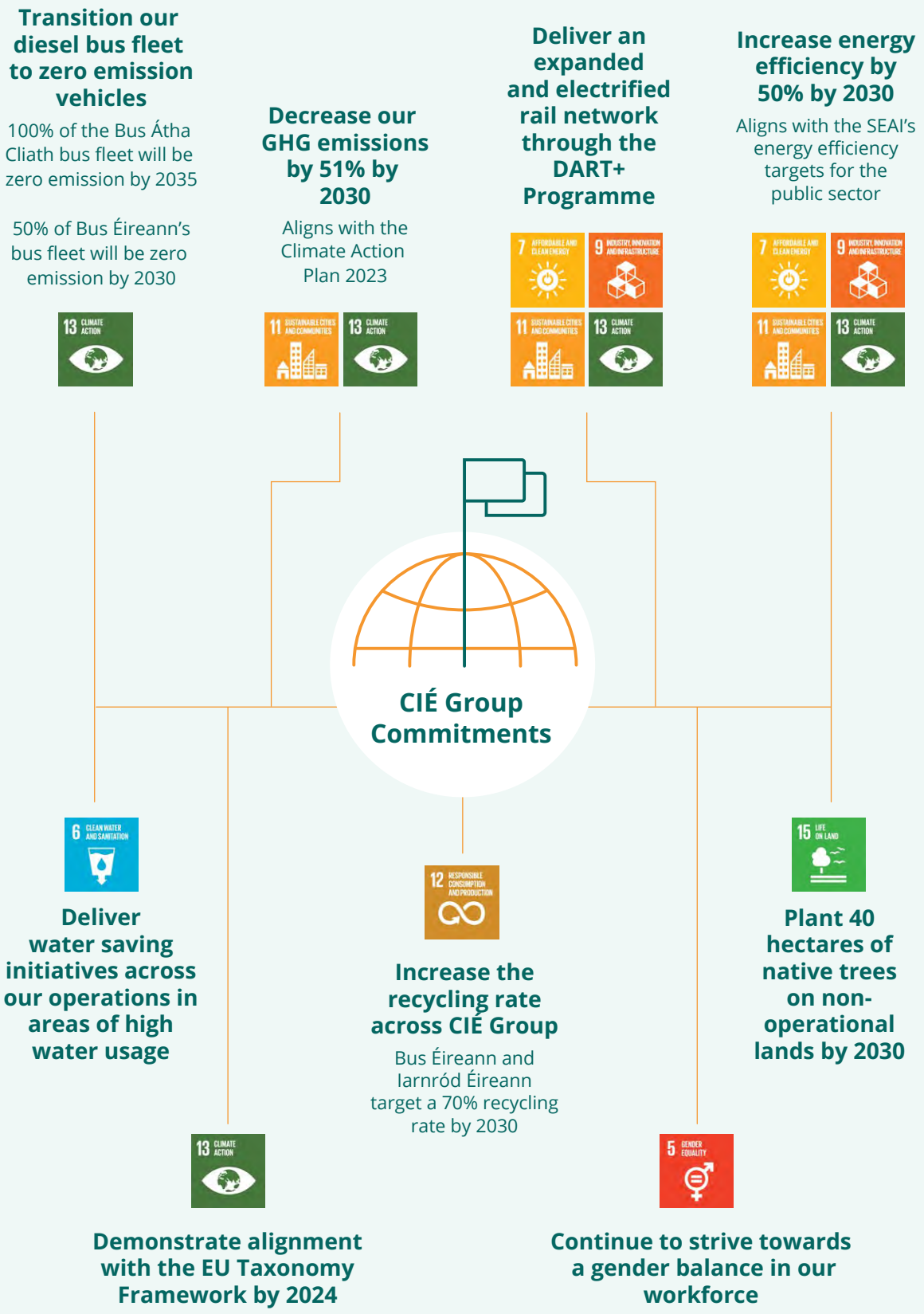
CIÉ Group is committed to transparency and accountability in climate disclosure and currently report under a range of voluntary and mandatory reporting frameworks. We have reported on our climate related performance to the Carbon Disclosure Project (CDP) since 2020, and in 2022, we increased our engagement with our value chain and Scope 3 emissions which improved our score from a B to an A-. This year also saw CIÉ Group sign up to the UN Global Compact to ensure that our policies and procedures reflect best practice in promoting human rights, labour rights, and the environment across our operations. In 2021, CIÉ Group became a supporter of the Taskforce on Climate-Related Financial Disclosures (TCFD) and this year we have continued to develop our climate related risk assessment and scenario planning process as we work to align our strategy with the TCFD reporting framework. While there are challenges to decarbonising the network of services within the CIÉ Group, technical analysis and trials of alternative zero emission fuels have provided a clearer plan to decarbonisation and to meeting climate targets. Continued government investment in the transition and a vision to decarbonisation has enabled the Group to prepare to commit to setting Science Based Targets (SBTs) under the SBTi.

Throughout 2022, CIÉ Group began preparatory work to measure, monitor and disclose our sustainability performance and report under the Corporate Sustainability Reporting Directive (CSRD), the EU Taxonomy, and the New Economy and Recovery Authority (NewERA) Climate Action Framework. By complying with the CSRD standards, CIÉ will provide increased transparency on sustainability performance and assess material impacts, risks and opportunities in relation to Environmental, Social and Governance (ESG) matters. Additionally, we aim to evaluate our performance regarding both sustainability impact and financial impact (double materiality).

As part of our commitment to becoming a fully sustainable business, the CIÉ Board approved the creation of the CIÉ Sustainability Fund in 2022 to finance the delivery of our strategy. In the first year of the Sustainability Fund, the CIÉ Group established programmes to deliver sustainability goals in areas such as waste reduction and recycling, sustainability education for staff, energy efficiency, research and development in low carbon technology, biodiversity, and water conservation.

Over the coming years we are committed to collaborating with stakeholders, suppliers, and employees to deliver the energy transition and to make an impact at scale across our environmental, social and economic targets and objectives.

4.1 Our Commitments



4.2 2022 Sustainability Highlights

CIÉ Holding Company & CIÉ Tours

Improved our CDP score and was awarded a score of A- in 2022, demonstrating leadership in greenhouse gas emissions management.

Offering an online "Sustainability Pass" education course to all employees. This has been rolled out across the Group through 2022 and 2023 for almost 1000 employees.

Joined the UN Global Compact to ensure best practice in promoting human rights and fair labour practices across our operations and value chain.

Adopting TCFD Recommendations, expanded climate risk management framework to undertaking climate scenario analysis across the Group.

Invested in sustainability skill development by offering Principles of Sustainability Level 7 certificate with University of Limerick to 83 employees across the Group.

CIÉ Tours developed their Responsible Tourism Policy to support the growth of sustainable tourism in Ireland.

Bus Átha Cliath

Rolling out the BusConnects Programme in partnership with the NTA to provide efficient and accessible bus networks.

Introduced the Dublin Buzz initiative, which aims to encourage biodiversity by supporting a wide variety of native bees and plants at Broadstone and Phibsboro depots.

Preparing for bus fleet electrification by upgrading key bus depots.

Installed a rainwater harvesting system at Summerhill bus depot to manage resource use more sustainably.

Re-opened the Community Spirit Awards to support the development of new projects, grow services and help raise community spirit in the local community.

Bus Éireann

Launched Ireland's first city electric fleet in Athlone town in early 2023 in partnership with the NTA.

Delivering circular economy initiatives across the Group, including the first reverse vending machines on the Irish public transport network.

Completed introduction of biofuels across the bus and rail fleets following train engine compatibility trials.

Awarded the 2022 SEAI Energy Award for Decarbonising Public Transport in the category Leadership in the Public Sector.

Winner of the Sustainable Supply Chain award at the ESG Business and Finance Awards in 2022.

Installed swift nest boxes in their Capwell depot to support Cork city's existing swift populations.

Iarnród Éireann

Expanding and electrifying the existing DART network through the DART+ Programme in partnership with the NTA.

Installed pollinator plans at 47 of 145 stations as of 2022, aiming to deliver pollinator plans at each station by 2030.

Introduced a water stewardship programme and water conservation initiatives to protect our freshwater resources.

Published biodiversity guidelines as part of pledge to minimise impacts on and maximise benefits to the environment.

Designing a cross company Wellbeing Strategy to be in place by 2025, prioritising health and wellness of employees.

4.3 Our Learnings So Far

Investing in low carbon technologies

CIÉ Group has set ambitious climate targets together with the NTA to decrease emissions in line with the Paris Agreement.

Decoupling emissions with passenger growth requires sustained investment in fleet modernisation and expansion of services. The electrification of services across rail and fleet will greatly increase our electricity demand and require planned upgrades of our infrastructure nationwide. Long distance and intercity services are challenging to decarbonise; CIÉ Group is trialling alternative technologies and low carbon fuels to provide solutions for hard to abate journeys.

Good governance

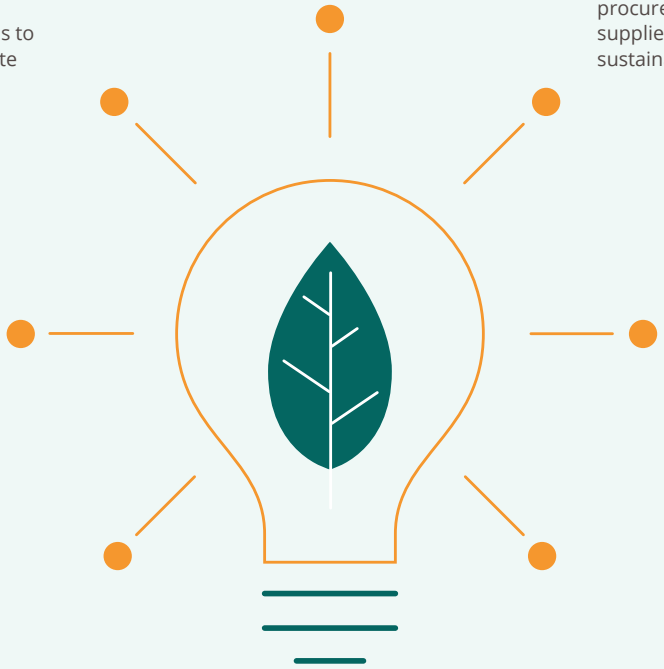
At CIÉ Group, commitment to sustainability is sponsored at the highest level.

Effective management of sustainability at Group level requires committed leadership, clear direction, and accountability. Our governance structure, which demonstrates top-down and cross-group oversight of sustainability, has enabled decisive action to deliver our strategy.

Sustainable procurement and market engagement

CIÉ Group is a significant purchaser with market impact. To facilitate green procurement, we are working closely with suppliers as we introduce sustainability criteria to contracts and tenders.

Through stakeholder engagement, we are working to reward industry players advancing ESG and support suppliers that are in the initial stages of their sustainability journey. With our responsible purchasing policy and stakeholder engagement efforts, our procurement teams are supporting suppliers as they introduce more sustainable practices.



Data management insights

The CIÉ sustainability strategy has set targets for resource management in waste, recycling, water use, and energy use. To accurately track our progress, we are working to introduce an easily accessible and automated environmental data system. This system, integrating smart meters and analytical software, will provide accurate and transparent data in real-time, enabling the incorporation of sustainability across strategic planning, risk modelling and scenario planning. In 2022, CIÉ Group partnered with Microsoft to develop best-in-class data insights capacity.

Partnerships

Addressing the climate crisis requires cross-sectoral collaboration to unlock the potential of climate-friendly technology and accelerate our transition to a low-carbon economy.

CIÉ Group works with industry working groups, academic research projects, and cross-sectoral partnerships with the aim of knowledge-sharing and gaining expert-level insights on potential pathways to decarbonise and to improve the sustainability of our operations. We take care to engage with our stakeholders and provide input on national policymaking for transport and sustainability.

Water stewardship

As a user of high volumes of water for cleaning and vehicle maintenance, CIÉ Group views water stewardship as a critical area for responsible resource management. By introducing water use audits, water-saving technology and training across our operations, CIÉ Group is working to conserve water resources and indirectly reduce the energy required to treat and transport water.

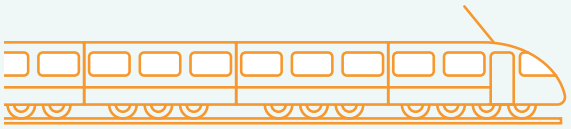
Creating a culture of sustainability

At CIÉ Group, we each have our role to play in making our business more sustainable. By offering education and training opportunities to our employees we can embed the fundamentals of sustainability across all levels of the company and include staff in the delivery of our sustainability strategy.

CIÉ Group has set ambitious climate targets together with the NTA to decrease emissions in line with the Paris Agreement.

SECTION 5

The Value We Create



Connecting people to their families, place of work, and place of education

246 million journeys in 2022

151,000 pupils transported to school per day in 2022, including 17,500 Special Educational Needs students

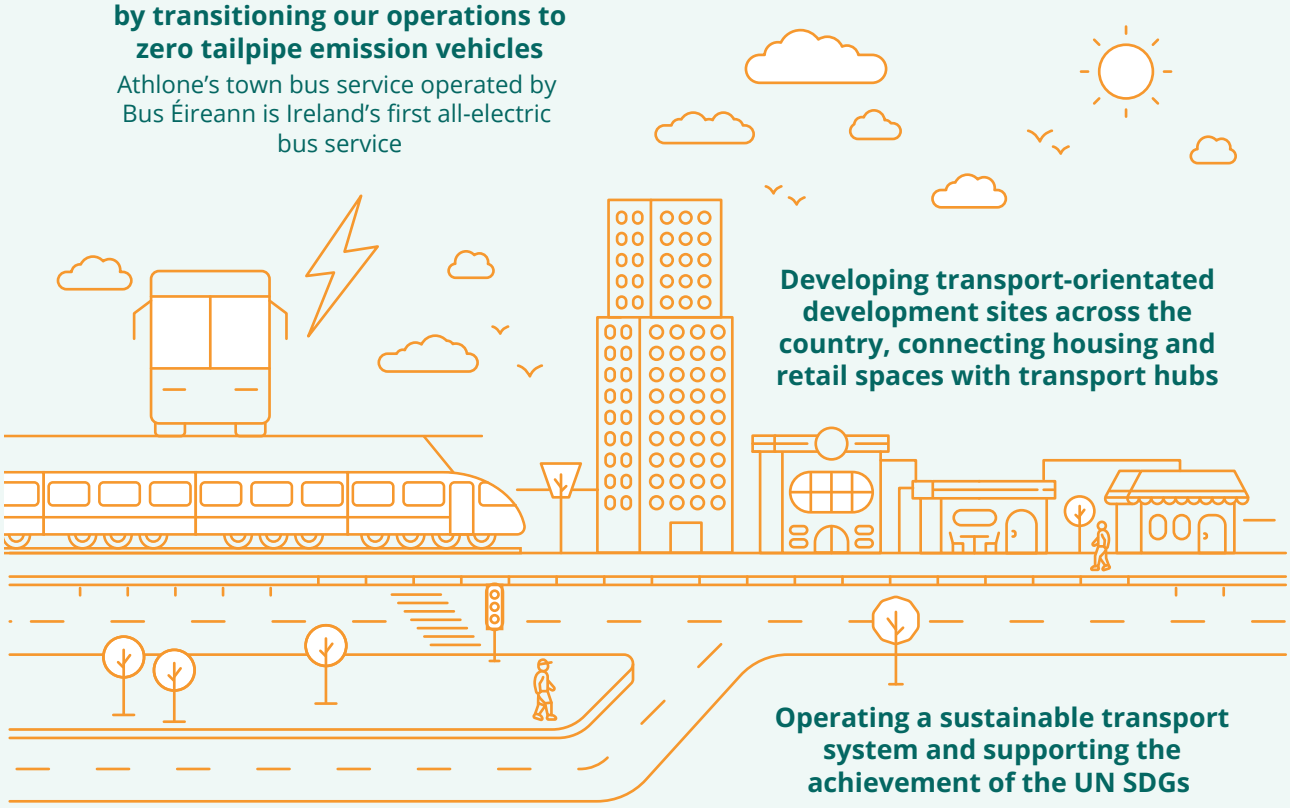
Supporting national climate targets by expanding our services

130% increase in daily public transport journeys by 2030 – CAP

Central to the delivery of the National Sustainable Mobility Policy and National Development Plan

Helping create cleaner, quieter cities by transitioning our operations to zero tailpipe emission vehicles

Athlone's town bus service operated by Bus Éireann is Ireland's first all-electric bus service



Developing transport-orientated development sites across the country, connecting housing and retail spaces with transport hubs

Operating a sustainable transport system and supporting the achievement of the UN SDGs

Offering sustainable mobility and a low-carbon alternative to private car use

GDA urban bus fleet to be zero tailpipe emissions by 2035

Developing a sustainability policy to deliver sustainable tourism in Ireland

Providing safe and secure employment for over 11,000 employees

5.1 Connecting People

As Ireland's national public transport provider, CIÉ Group is central to the provision of sustainable mobility across the country. Transport is a key driver of economic and social development, connecting people to jobs, education, health care, and each other. In 2022, CIÉ Group delivered 246 million passenger journeys, including 50.3 million schools transport trips operated by Bus Éireann.

CIÉ Group plays an important role in providing employment for our 11,204 employees. Beyond employment, CIÉ Group generates economic and social value throughout our value chain and the communities we serve. Through our extensive bus and rail networks, we provide vital transportation options for individuals commuting to work or educational institutions, facilitating essential mobility for their daily routines.

5.2 Sustainable Mobility

The mission of CIÉ Group is to provide a safe, accessible, efficient, and low-carbon transport option, offering a sustainable alternative to private car use. With every car journey avoided in Ireland, our services alleviate traffic congestion, improve road safety, reduce air pollution, and mitigate GHG emissions from the transport sector. CIÉ Group is developing our land and property assets to deliver a model of transit orientated development by providing compact urban, residential and commercial development around key transport hubs. As we continue to deliver our sustainability strategy with our stakeholders, we will prioritise and support measures that demonstrate the potential to generate systemic change.

According to the OECD/ Climate Change Advisory Council (CCAC) report, "Redesigning Ireland's Transport for Net Zero: Towards Systems that Work for People and the Planet" which was cited in the CAP 2023, Ireland's transport system should prioritise policies with high transformative potential such as road space reallocation, mainstreaming of on-demand shared services, and questioning current mind-sets around car use. This echoes the National Sustainable Mobility Policy, which includes actions incorporating aspects of road space reallocation, shared mobility, rural community-based transport solutions, behavioural change, and investment in public transport infrastructure. The policies that reduce car dependence, such as improving access to services for both urban and rural communities can greatly enhance wellbeing while also benefiting the environment. The planned expansion of CIÉ Group's services will support these measures, promoting modal shift and sustainable mobility.

Delivering national transport infrastructure requires long-term planning and investment. CIÉ Group is committed to supporting ambitious national policy, engaging and aligning with state agencies, the Government and all relevant stakeholders, and welcoming innovative policy development and low carbon technologies to achieve national climate and sustainability goals.

5.3 Supporting EU and Irish Climate Targets

Transport represents the second-largest source of GHG emissions in Ireland with over 10.9 million tonnes of GHGs emitted in 2021[1], accounting for 18% of total emissions. The transport sector has shown the greatest overall rise in GHG emissions with an increase of 113.7%[2] since 1990.

Under the CAP sectoral emission targets, the transport sector must reduce its emissions by 50% to 6 million tonnes of carbon dioxide gas equivalent (CO2e) by 2030. Although Ireland has committed to reducing its GHG emissions by 4.8% per annum from 2021 to 2025, transport related emissions increased by 6.7% between 2020 and 2021. A return to private car use following the lifting of COVID-19 restrictions was a significant contributor to Ireland's higher emissions, which are expected to have further increased in 2022[3]. Achieving the sectoral emission target for transport can only be achieved by a shift to sustainable modes of transport, with an increase in active travel and an expansion of public transport journeys.

Greenhouse gas emissions in Ireland by sector, 2021

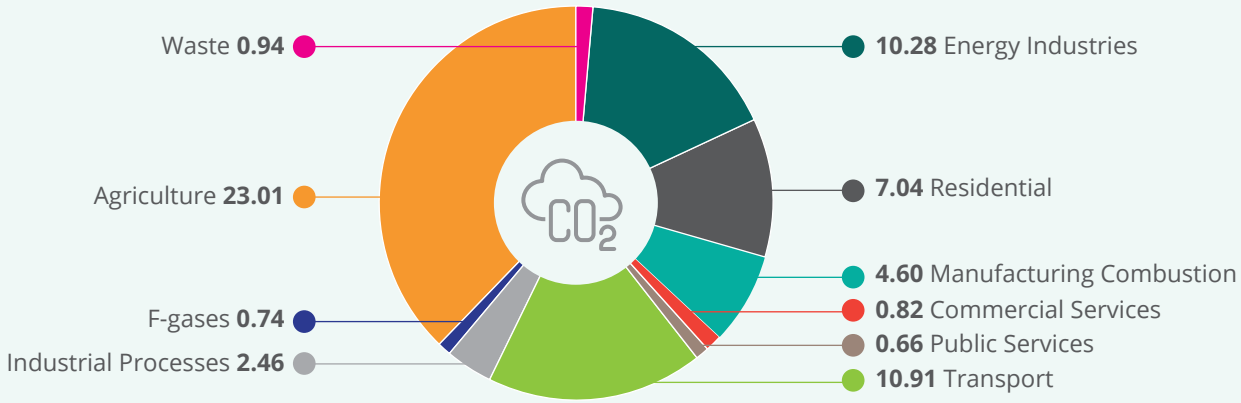
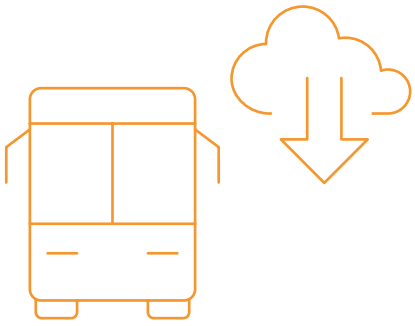


Figure 1. Greenhouse gas emissions in Ireland by sector in 2022. Figures reported in million tonnes of CO2e.

With over 246 million public transport journeys provided by the CIÉ Operating Companies in 2022, provision of public transport has helped mitigate carbon emissions from the transport sector by offering a lower-carbon travel option compared to private car use.



1 EPA, Latest emissions data: https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/#:~:text=In%202021%2C%20Ireland's%20provisional%20GHG,for%202020%20compared%20to%202019
2 EPA, Transport Emissions: https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/transport/
3 SEAI, Energy in Ireland 2022: https://www.seai.ie/publications/Energy-in-Ireland-2022.pdf

Ireland's public transport network supports the delivery of the National Development Plan 2021-2030 (NDP), Project Ireland 2040, National Sustainable Mobility Policy, 2023 Climate Action Plan (CAP), and the Connecting Ireland Rural Mobility Plan. The implementation of these policies will require cross cutting sectoral measures and well-designed urban and spatial development. CIÉ Group is developing our land and property assets to deliver transit orientated development and accommodate residential and commercial use around key transport hubs. The bus and rail fleets across CIÉ Group will also see a transformation to low carbon technology and there is additional planned fleet transformation across the NTA BusConnects and DART+ programme.

From an EU perspective, the European Commission has adopted a set of proposals to make the EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions, delivering energy savings, diversification of energy supplies, and accelerated roll-out of renewable energy to replace fossil fuels in homes, industry and power generation.

The policy development in the EU and Ireland calls for reduction in transport related emissions and an increase in sustainable mobility and modal shift to less carbon intensive forms of transport. CIÉ Group, as Ireland's largest public transport operator, will strive to achieve the goals and targets as set out in these policies and provide additional value to the day to day lives of the people of Ireland.

5.4 2030 UN Agenda for Sustainable Development

A sustainable public transport system is fundamental to realising the 2030 Agenda for Sustainable Development and achieving the 17 UN Sustainable Development Goals. SDG 11, with the aim of "making cities and human settlements inclusive, safe, resilient, and sustainable", includes a target of "providing access to safe, affordable, accessible, and sustainable transport systems for all ... notably by expanding public transport by 2030."

As we work to make our operations more sustainable, CIÉ Group has identified SDGs where we can provide value. By decarbonising our operations, protecting labour rights in the workplace, promoting diversity and equal access, increasing energy efficiency and using our natural resources more sustainably, we help support the achievement of a range of SDGs. The wider contributions of the CIÉ Group towards the SDG are summarised in Appendix IV: CIÉ Group Alignment and Contribution to the SDGs.

SECTION 6

Non-Financial Performance Indicator (KPI) Highlights

Measures to meet public sector climate targets and reduce the carbon footprint of the CIÉ Group Operating Companies have delivered year on year improvements from baselines.

CIE Sustainability *Driving Change*

Measuring Environmental Performance 2022

Operating Company		BUS ÉIREANN	DUBLIN BUS	IRISH RAIL
	2030 TARGET	% DECREASE IN SCOPE 1 & 2 EMISSIONS (2018 BASELINE YEAR) 2022		
CO2 REDUCTIONS	51.0%	6.6%	10.2%	2.3%
	2030 TARGET	SEAI VERIFIED 2021 ENERGY EFFICIENCY IMPROVEMENT*		
ENERGY EFFICIENCY	50.0%	20.7%	23.6%	29.8%
	2030 TARGET	RECYCLING RATE % 2022		
RECYCLING RATE	75.0%	20.0%	73.0%	52.0%

*The SEAI-verified energy efficiency figures for 2022 are pending.
These will be publicly available in on the SEAI M&R website once verified.

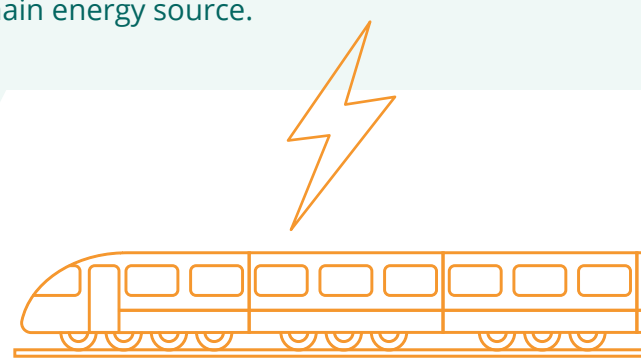
6.1 Energy Consumption

CIÉ Group places importance on the accuracy and reliability of our sustainability data and actively collaborates with partners to ensure its validity. Each Operating Company within CIÉ reports their annual energy use metrics to the Sustainable Energy Authority of Ireland (SEAI), which verifies the reported data and publishes it on their public Monitoring and Reporting (M&R) system. Since 2009, CIÉ Operating Companies have consistently measured and tracked energy consumption on the M&R system.

The impact of the COVID-19 pandemic and the subsequent travel and operational restrictions have had a notable influence on CIÉ Group's total energy consumption. In 2020, the Group experienced a significant decrease in energy use as a result of these restrictions. However, as the limitations gradually eased in 2021 and 2022, the energy consumption levels began to increase and show an upward trend.

CIÉ Group's energy consumption profile reflects a strong reliance on diesel fuel as a primary energy source (Figure 2). Comparatively, the consumption of electricity and gas consumed across the Group is considerably lower.

The planned transition of CIÉ Group's fleets to electric and battery electric technology is expected to bring about a substantial transformation in the energy consumption profile, shifting from diesel fuel to electricity as the main energy source.



CIÉ Group Energy Consumption

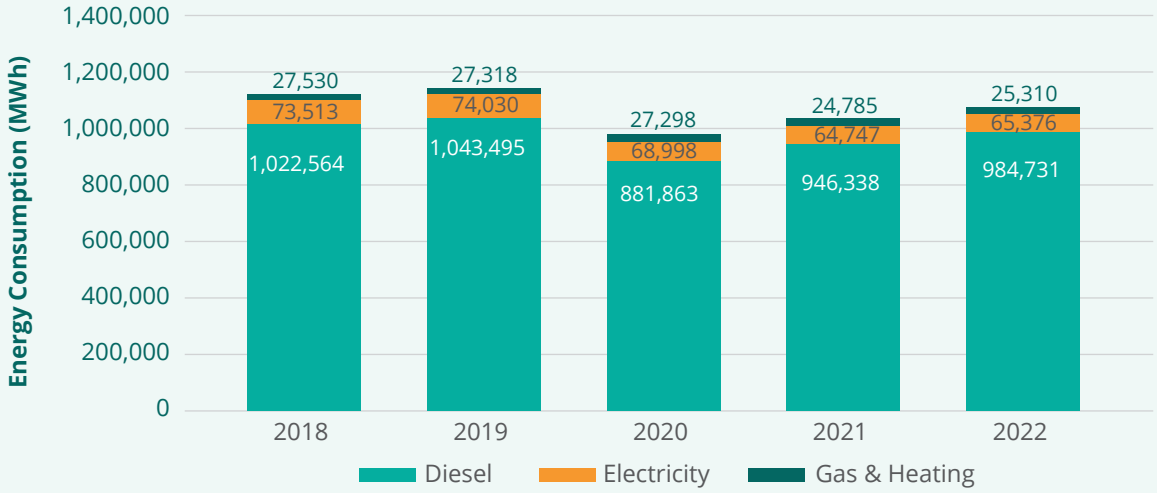


Figure 2. CIÉ Group energy consumption profile for 2022. Electricity and gas figures for CIÉ Holding Company and CIÉ Tours now included in energy consumption totals for 2018-2022.

6.2 Scope 1 and 2 Carbon Emissions

The CIÉ Group energy consumption profile (Figure 1) is dominated by diesel fuel use, and this is reflected in our carbon emissions profile (Figure 3), where CIÉ Group's Scope 1 emissions represented 92% of total emissions in 2022 (excluding Scope 3 emissions). As CIÉ Group's energy consumption profile shifts towards a greater share of electricity consumption, the Group's emissions profile will also reflect this transition and demonstrate an increasing proportion of Scope 2 emissions.

In 2021, CIÉ Group established an ambitious target in line with the CAP to reduce total Scope 1 and 2 carbon emissions by 51% by 2030, using a baseline year of 2018.

Between 2018 and 2022, CIÉ Group's Scope 1 and Scope 2 emissions decreased by approximately 3.81% and 20.10%, respectively.

CIÉ Group Scope 1 & 2 Emissions (2018-2022)

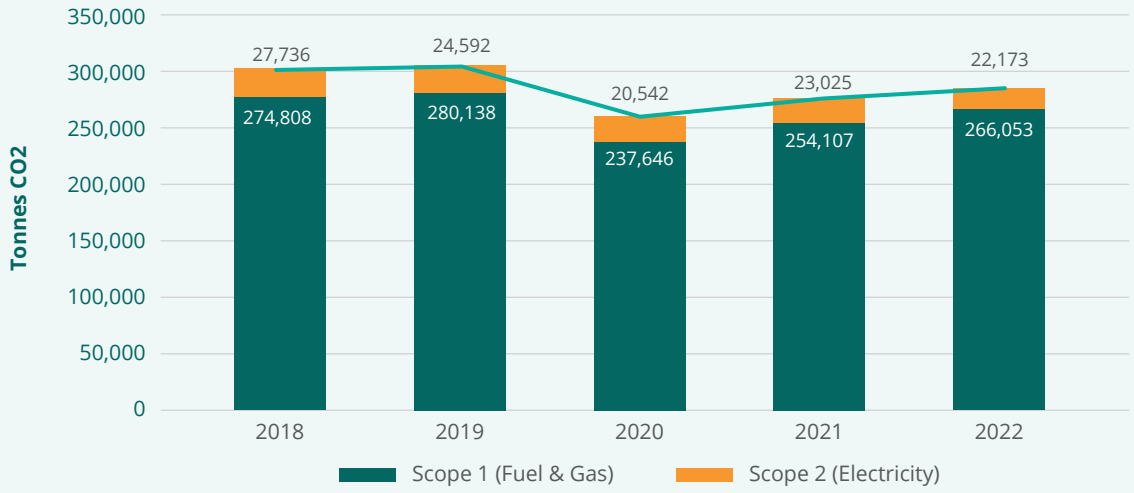


Figure 3. CIÉ Group cumulative Scope 1 and Scope 2 carbon emissions. Scope 1 (direct) emissions are generated by the combustion of fuel. Scope 2 (indirect) emissions are generated by the consumption of electricity.

Analysing the emissions reduction trajectory, if CIÉ Group were to achieve a consistent reduction rate from 2018 to 2030, the target for cumulative Scope 1 and 2 carbon emissions by 2022 would have been a 17% reduction. However, CIÉ Group managed to reduce our emissions by 5.40% in 2022 from a 2018 baseline year.

The largest decrease in emissions was observed in 2020 due to the impact of the COVID-19 pandemic. The restrictions and reduced services led to lower energy use in offices and less fuel consumed for transport. With the travel restrictions gradually lifted in 2021 and fully lifted 2022, CIÉ Group emissions again returned to pre-pandemic levels as emissions slightly increased in 2022.

CIÉ Group Scope Emissions: Actual vs. Target

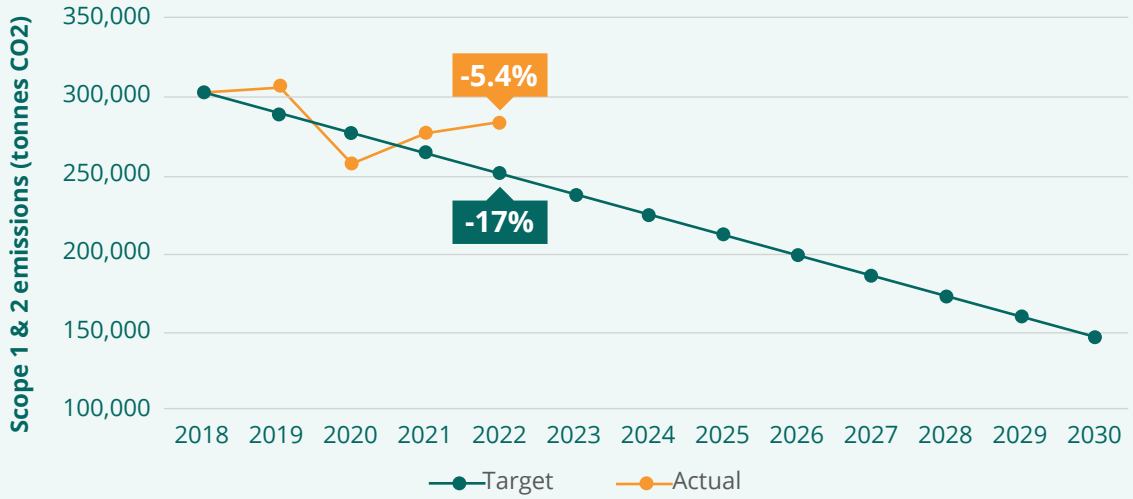


Figure 4. CIÉ Group Scope 1 and 2 emissions trend plotted against the emissions trajectory in line with the target of decreasing emissions by 51% by 2030.

Over this period the CIÉ Group and the NTA have been developing operational plans to transition to a low carbon network. To achieve our 2030 climate target, CIÉ Group will accelerate investment in technical solutions to reduce carbon emissions. Progress will be non-linear, with significant lead time for delivery of operational improvement and infrastructure development for fleet transition over the next number of years. This presents a particular challenge as the Group plans for service expansion to enable modal shift away from private car use, with the CAP targeting a 130% increase in daily public transport journeys by 2030. However, as the CIÉ Group energy mix shifts towards electrification and away from fossil fuel use, our overall emissions should begin to decrease due to the decarbonisation of grid electricity and the lower comparative carbon intensity of electricity.

Transitioning to electric and battery electric vehicle technology in urban and high-density areas will deliver significant reduction in emissions for the Group, shifting energy dependence to electricity and minimising dependence on diesel fuel, resulting in a decrease in Scope 1 emissions.

The CIÉ Group and our Operating Companies are carrying out preparatory work to enable the electrification of fleet. Bus depots in specific locations are being upgraded to accommodate the charging and maintenance requirements of battery electric vehicles. In 2022 Bus Éireann and the NTA completed the conversion of the Athlone bus fleet to battery, requiring an extensive upgrade of the bus depot to install new charging infrastructure, including a substation, chargers, charging stations and depot/charge management system. The fleet conversion will save up to 400 tonnes of tailpipe CO2 emissions each year.

The DART rail network will see similar benefits, with new electric and battery electric train carriages set to enter into service in 2025. These carriages are designed for reduced energy consumption and will also operate with zero tailpipe emissions. Under the DART+ Programme, the DART network will undergo a long-term series of investments and upgrades that will double the capacity and treble the length of the electrified of the network.

CIÉ Group Emissions Intensity

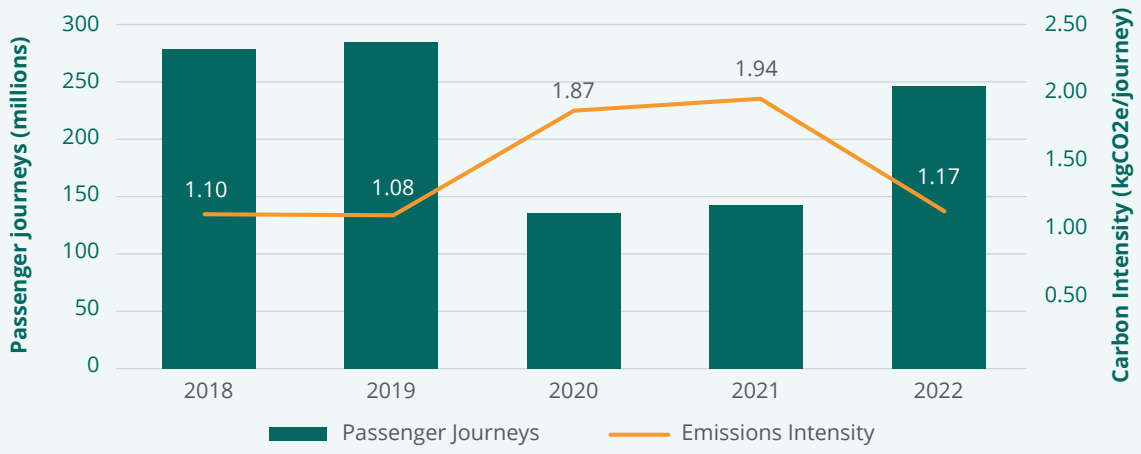


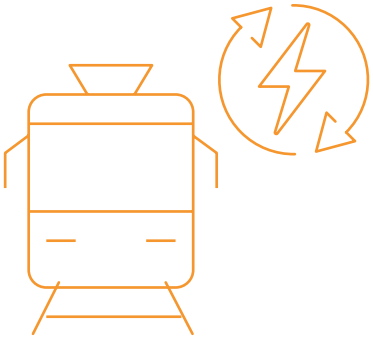
Figure 5. CIÉ Group carbon emissions intensity per passenger journey from 2018-2022.

The emissions intensity of passenger journeys delivered by CIÉ Group is presented in Figure 5. Emissions intensity is measured in kgCO2e per passenger journey and serves as a key indicator of the energy efficiency and environmental impact of the CIÉ Group's transportation activities. The emissions intensity metric depends on several factors, including the energy sources used for transportation, the efficiency of vehicles, the distance travelled, and the number of passengers carried. A lower intensity metric indicates a more efficient and sustainable level of operations.

In 2018 and 2019, the emissions intensity remained relatively stable, suggesting a consistent level of emissions generated per passenger journey during this period. The COVID-19 pandemic however, led to a significant disruption of CIÉ Group's services. The emissions intensity rose to 1.87 kgCO2e per journey in 2020, reflecting a substantial increase in emissions per passenger journey. The higher emissions intensity can be attributed to the decline in the number of passenger journeys, which halved between 2019 and 2020. With reduced travel demand and fewer passengers to distribute emissions across, the emissions intensity per journey increased.

As the travel restrictions gradually lifted in 2021, passenger numbers remained low and emissions intensity therefore remained high. With the recovery of passenger journeys to 246.3 million in 2022 compared to 274.9 million in 2018, the emissions intensity began approaching pre-pandemic levels leading to a reduction in carbon intensity.

The planned electrification of the bus and rail fleets and investments paired with investment into energy efficient and low carbon technology should continue to lead to a decrease in CIÉ Group's emissions intensity, offering an increasingly low-carbon transport option across Ireland.



Emissions intensity serves as a key indicator of the energy efficiency of and environmental impact of the CIÉ Group's transportation activities.

CIÉ Group Scope 1 & 2 Emissions by Operating Company

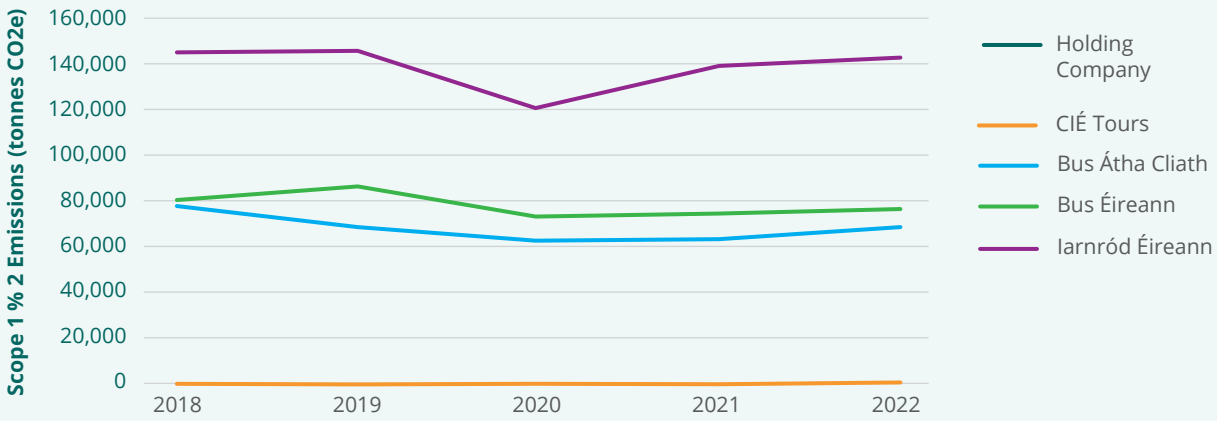


Figure 6. CIÉ Group scope 1 and 2 carbon emissions by Operating Company

Each of the CIÉ Group Operating Companies experienced a notable decrease in GHG emissions in 2020, followed by an increase as passenger numbers recovered following the lifting of COVID-19 restrictions. The electric vehicles planned for deployment commencing in 2023 and beyond will contribute to decreased emissions over the next decade. Iarnród Éireann, accounting for approximately 50% of CIÉ Group's energy consumption and scope 1 and 2 carbon emissions, plays a pivotal role in the decarbonisation strategy. The transition of the rail fleet to electric train carriages and low-carbon vehicle technology represents a key element in CIÉ Group's efforts to reduce emissions and achieve our sustainability goals.

6.3 Passenger Numbers and Energy Intensity

The impact of COVID-19 restrictions had a significant impact on passenger journeys in 2021 and 2020, which subsequently impacted CIÉ Group's energy efficiency performance. At the end of 2022, passenger numbers approached pre pandemic levels.

Passenger Journeys (Million)	2022	2021	2020	2019	2018
Iarnród Éireann	35.8	17.4	17.9	50.2	47.9
Bus Átha Cliath	121.4	70.0	69.4	141.8	143
Bus Éireann	89.5	57.5	51	89.14	84
Total Passenger journeys (Million)	246.7	144.9	138.4	281.1	274.9

Table 1. CIÉ Group passenger journeys in 2022 (in millions). Figures include Bus Éireann's school customer journeys.

CIÉ Group Energy Consumption Per Passenger Journey

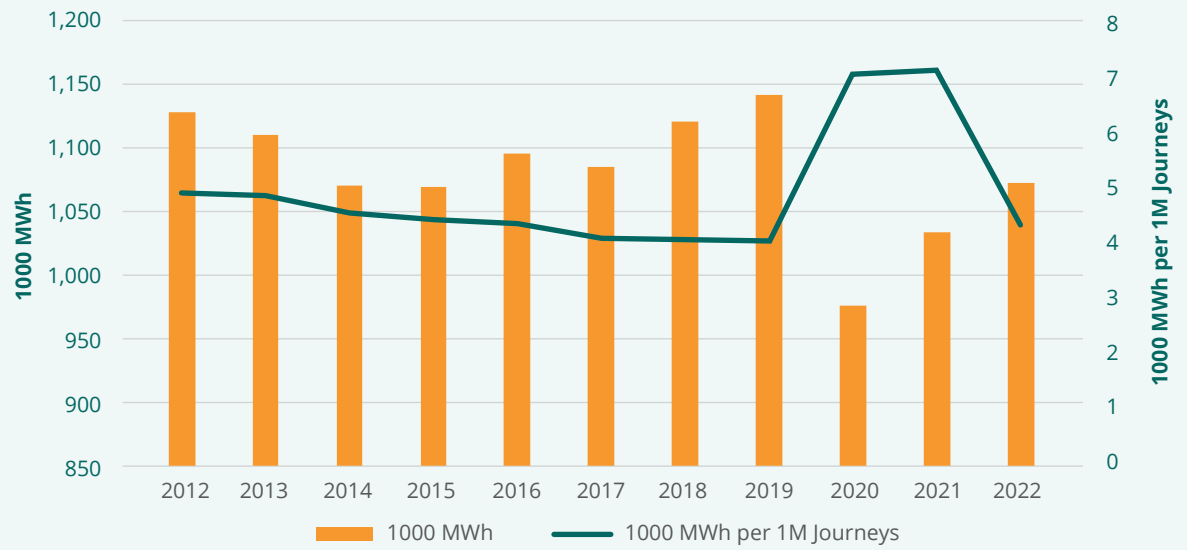


Figure 7. Total energy consumption (1000s MWh) plotted against energy use intensity (MWh per 1 million journeys). Total energy consumption figures in this graph do not include CIÉ Holding Company and CIÉ Tours. CIÉ Holding Company and CIÉ Tours together contribute less than 0.1% of CIÉ Group emissions.

The CIÉ Group total energy consumption can be plotted against the number of passenger journeys delivered to obtain an energy intensity figure (Figure 7). The energy intensity metric provides insights into the Group's energy efficiency performance, with a lower intensity metric indicating a higher degree of energy efficiency.

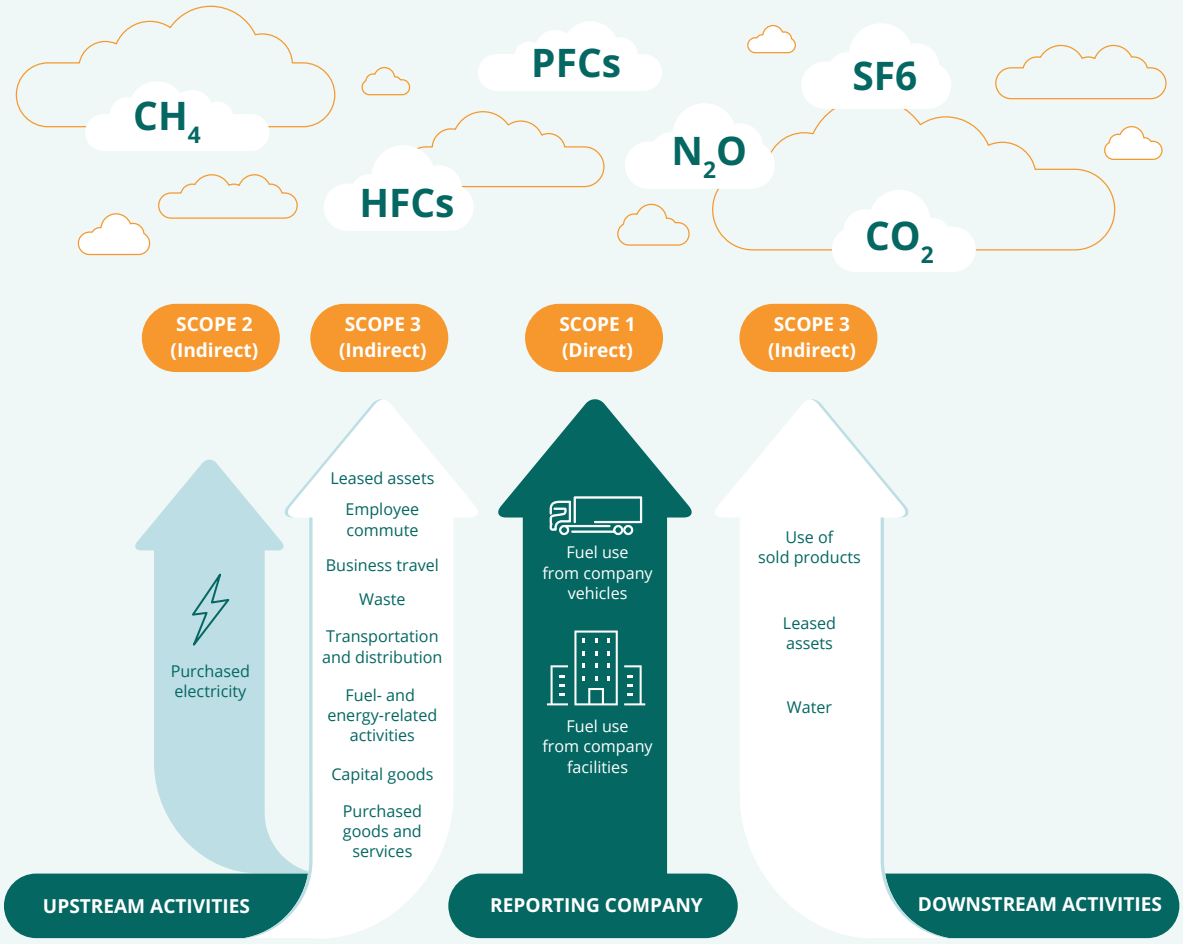
Between 2021 to 2019, CIÉ Group experienced a consistent decline in energy intensity, despite an overall increase in energy consumption. This demonstrates a constant increase in energy efficiency through fleet upgrades and the use of energy efficient technology. In 2020 and 2021, CIÉ Group's energy use decreased while energy intensity increased. This was mainly due to the travel restrictions imposed by COVID-19, which limited the capacity of vehicles to carry passengers. As a result, the energy consumption per million passenger journeys increased during this period. However, as passenger journeys started to approach pre-pandemic levels, the energy use per million passenger journeys decreased significantly once again.

As CIÉ Group delivers on our commitment to incorporate energy efficient technology in our operations, including behind-the meter renewable energy generation and technology upgrades, we aim to achieve a significant and continuing reduction in our energy intensity metric.

	Bus Átha Cliath	Bus Éireann	Iarnród Éireann
Proportion of diesel powered buses/ carriages	78%	92%	61%
Proportion of hybrid buses/carriages	22%	7.6%	15%
Proportion of fully electric or zero tailpipe emissions buses/carriages	0%	0.4%	24%

Table 2. Proportion of CIÉ Group fleet according to energy use type as of year-end 2022

6.4 CIÉ Group Scope 3 Carbon Emissions



Key Scope 1, 2, and 3 emissions sources (stars) generated by CIÉ Group's operations.

2022 CIÉ Group Emissions Breakdown (tonnes CO2e)

2022 Scope 3 Emissions Profile

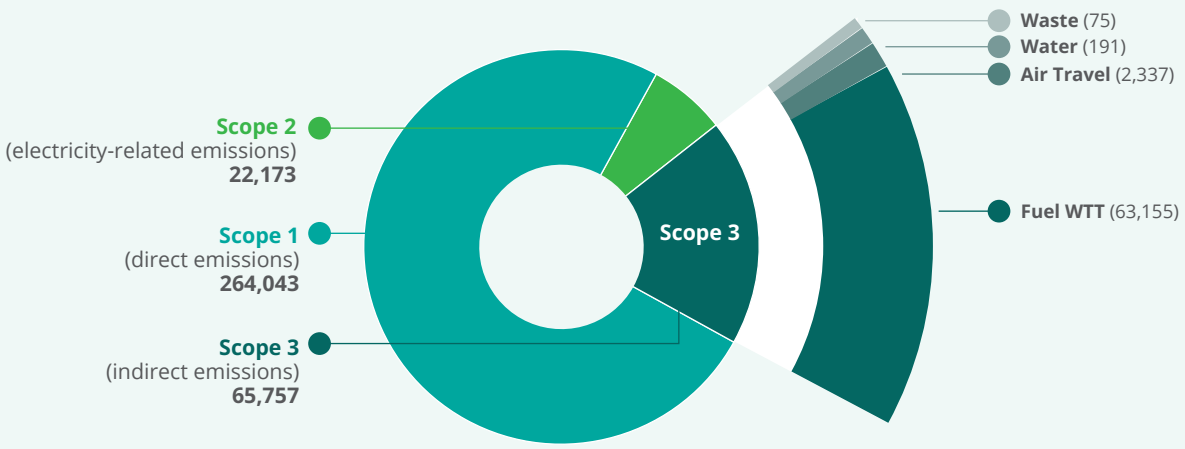


Figure 8. CIÉ Group emissions profile (in tonnes of CO2e). Calculated Scope 3 emissions include the emissions related to waste management, water use, business travel, and fuel and energy related activities.

In 2022, following a Scope 3 emissions screening process, CIÉ Group identified the Scope 3 emissions categories relevant to our operations and embarked on a data collection process to estimate Scope 3 emissions from upstream and downstream activities.

CIÉ Group's Scope 3 carbon emissions are estimated using purchased goods and services, capital investments, upstream fuel and energy use, water use, waste, business (air) travel, employee commuting, and our leased assets. The initial calculation of Scope 3 emissions has included indirect carbon emissions from our water use, waste generated in operations, business travel, and the upstream (well-to-tank) emissions from fuel and energy use (Figure 8).

To enhance the accuracy and efficiency of our carbon accounting and environmental reporting, CIÉ Group is undergoing a sustainability data management transformation. This initiative involves migrating from fragmented and manual data capture, calculation and reporting processes to a unified platform that automates the collection of near real-time activity data. In 2022, we partnered with Microsoft to assist in the development of their Cloud for Sustainability, a data monitoring platform that will help companies to record, report, and reduce their environmental impacts. For further details on our work with Microsoft, please refer to Our Partnerships.

We will also continue to review and improve the quality of our available data so that we may expand our carbon accounting to include all Scope 3 categories by 2023.

For more information on CIÉ Group's sustainability KPIs in 2022, please refer to the Sustainability KPIs section.

6.5 Circular Economy

CIÉ Group Waste and Recycling 2022

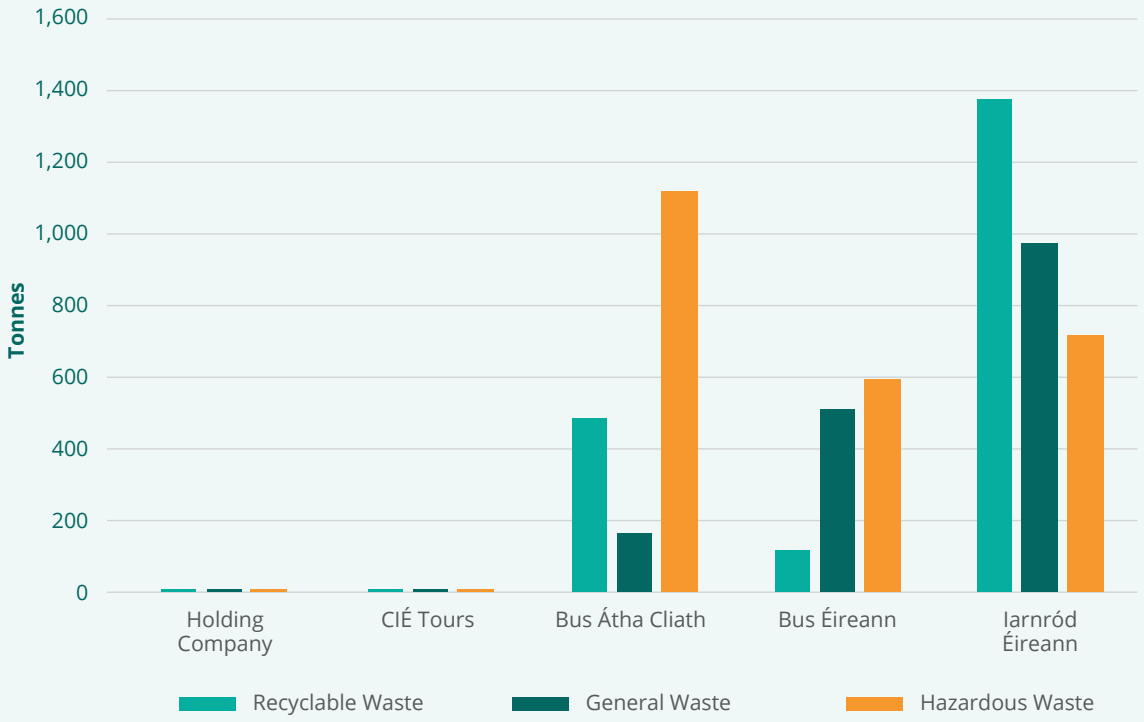


Figure 9. CIÉ Group municipal, recycled, and hazardous waste generated in operations in 2022.

CIÉ Group generates three primary waste streams in our operations: general waste, recyclable waste, and hazardous waste (Figure 9). The hazardous waste stream is comprised of the by-products of operating and servicing heavy-duty vehicles, such as engine coolant, motor oil, batteries, and oily rags.

To drive circularity we have programmes in place to tackle major waste streams, in particular hazardous waste, such as Iarnród Éireann's engine coolant recycling system. Each Operating Company is implementing circular initiatives to reduce general waste and increase the recycling rate across CIÉ Group. Further details on these programmes are available in the Circular Economy section of this report.

CIÉ Group generates three primary waste streams in our operations: general waste, recyclable waste, and hazardous waste.

CIÉ Group Recycling Rates				
	2021	2022	2030 Target	Change since previous year
Bus Átha Cliath	63%	73%	Not yet in place	↑
Bus Éireann	15%	20%	70%	↑
Iarnród Éireann	50%	52%	70%	↑
CIÉ Holding Company	27.4%	33%	Not yet in place	↑
CIÉ Tours	13.3%	29%	Not yet in place	↑

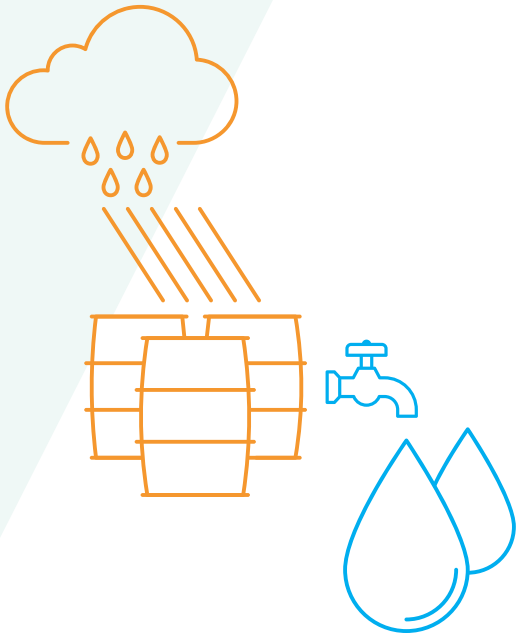
Table 3. Recycling rates are calculated by the proportion of waste sent for recycling out of the total amount of general waste. Hazardous waste is not included in the recycling rate.

To support circular targets, the CIÉ Group has a number of programmes in place to tackle major waste streams.

6.8.1 Water Use

CIÉ Group relies heavily on water for our daily operations, particularly for vehicle maintenance and washing (Figure 10). To deliver on our commitment to sustainable resource management, Bus Átha Cliath, Iarnród Éireann and Bus Éireann embarked on water use mapping exercises and audits in 2022 to better understand water usage and identify areas for improvement. Bus Átha Cliath will install smart meters to capture accurate and timely water use data at sites reliant on well water.

By mapping water usage, CIÉ Group will develop a more accurate understanding of water conservation, which will provide a baseline for setting targets for reducing water consumption. In addition to these measures, we will also explore the use of water-efficient technologies to further reduce water usage.



CIÉ Group Water Use 2022 (m3)

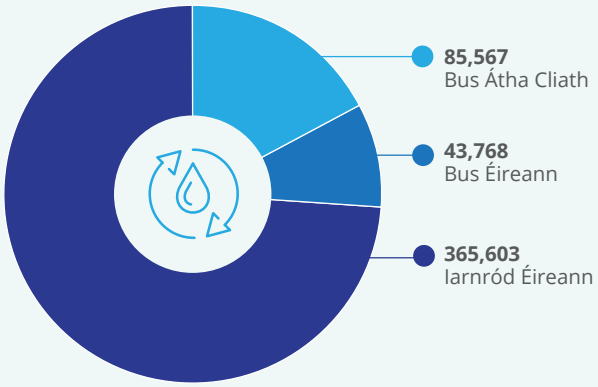


Figure 10. CIÉ Group waster use consumption in 2022, reported in cubic metres of water. The figure for Bus Éireann excludes one location under investigation to reflect their typical water use profile. The water use figure for Iarnród Éireann includes the CIÉ Holding Company.

In 2022, Bus Átha Cliath installed a rainwater harvesting system at Summerhill bus depot to collect and stores rainwater, reducing reliance on mains water. The findings from this pilot will be used to evaluate the extension of this system to other depots.

Iarnród Éireann and Bus Éireann introduced a water management system in 2022 to accurately track water use, address leaks and identify discrepancies in use throughout their operations. For further detail on CIÉ Group's water management strategies, please see section 11.5 Water Management.

6.6 Diversity and Gender Equality

CIÉ Group values diversity and equal representation to provide a culture for a successful and sustainable business. Historically, female participation has been underrepresented in the transport sector.

Diversity is critical for driving innovation, improving decision-making, and ensuring that we meet the needs of all our customers. The CIÉ Group Operating Companies have put targets in place to improve the gender balance in the workplace with recruitment campaigns targeting a balanced workforce. Additional details on diversity and equality initiatives are available in the Diversity and Equal Opportunity section of this report.

Diversity is critical for driving innovation, improving decision-making, and ensuring that we meet the needs of all our customers.

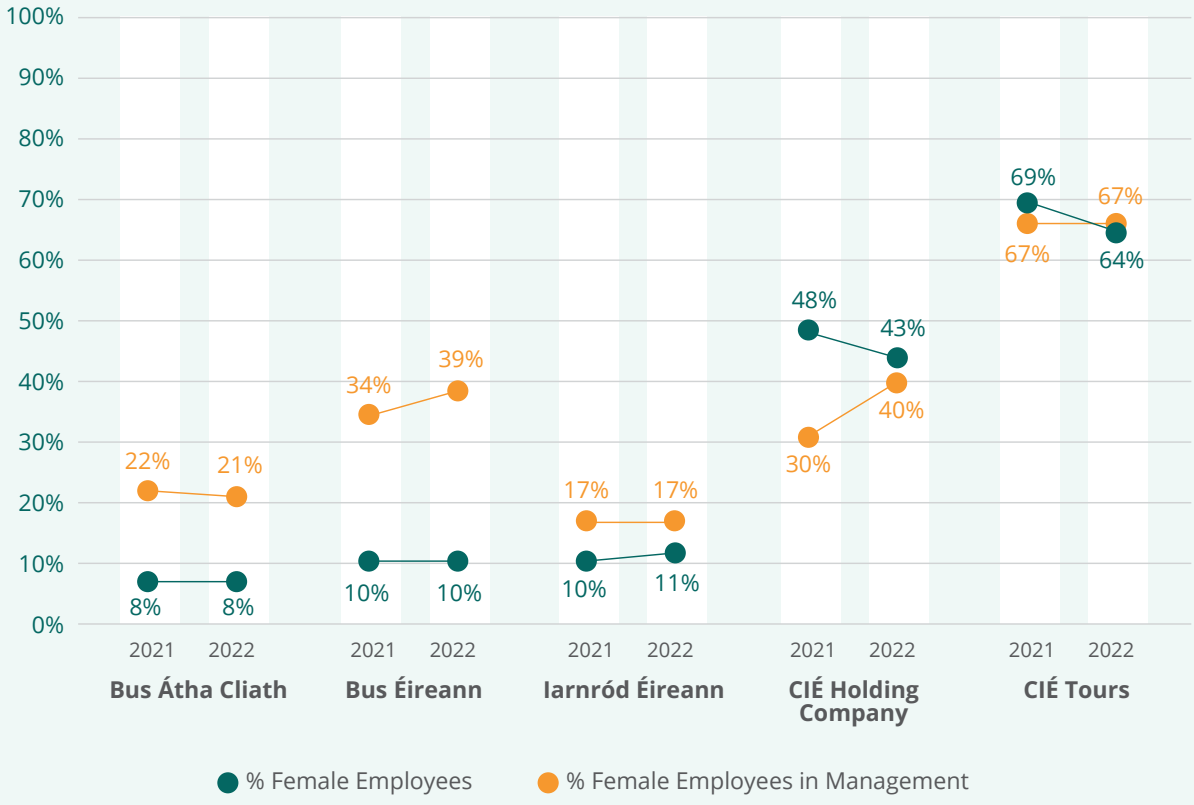


Figure 11. Female employee representation in CIÉ Group from 2021-2022. The Bus Éireann, Holding Company, and Iarnród Éireann figure for female employees in management represents female employees in senior management roles.

SECTION 7

Sustainability Reporting Frameworks

CIÉ Group is committed to managing our strategic decisions with a focus on double materiality and sustainability disclosure. We recognise the importance of measuring, monitoring, and disclosing our sustainability performance to our stakeholders, and we are preparing to report to the European Commission through the CSRD in 2026. To ensure that CIÉ Group meets the highest standards in managing sustainability issues, we are seeking to increase our transparency and accountability around sustainability objectives.

To ensure we deliver on our sustainability commitments, we are seeking to increase transparency and accountability on our performance.

7.1 Sustainability Reporting Frameworks

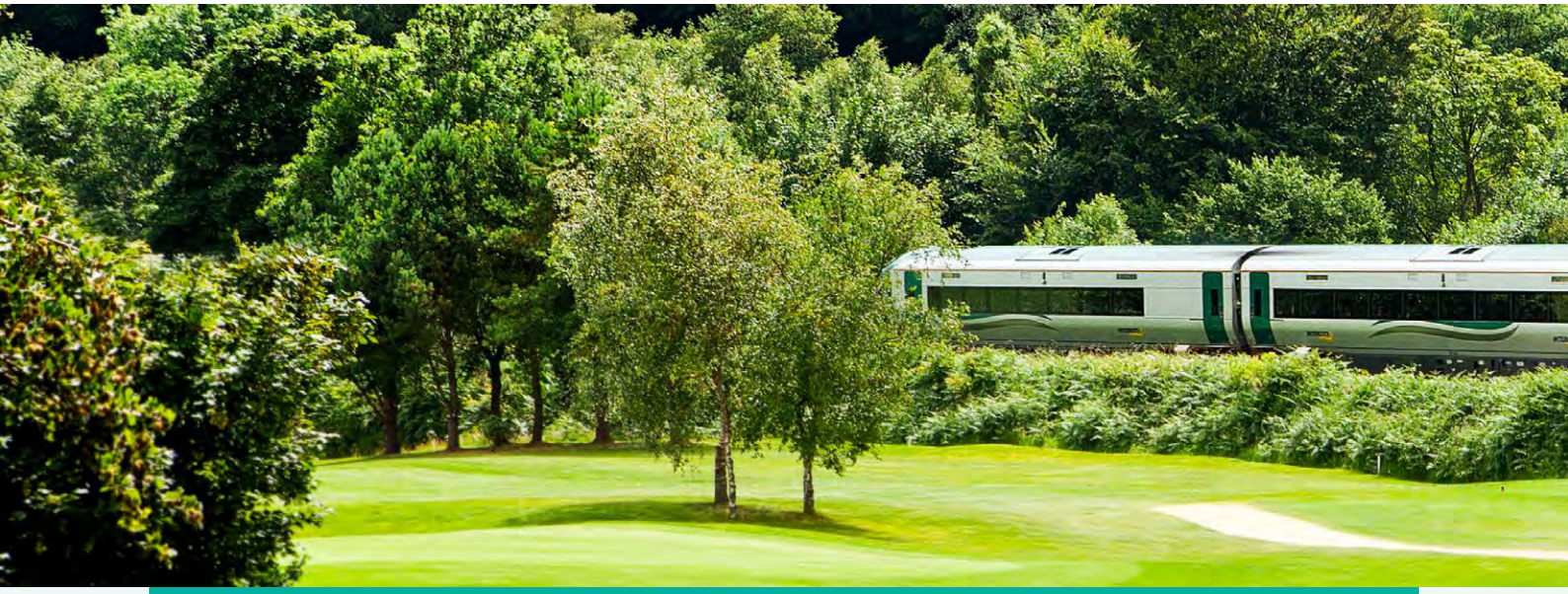
Reporting Framework	Description	Status
Carbon Disclosure Project	The Carbon Disclosure Project is an international, not-for-profit organisation that provides a global reporting platform for organisations to measure, disclose, and share information on their carbon emissions and management strategy. Respondents receive a score between A and F reflecting the level of their awareness and management of their carbon emissions. CIÉ Group has been reporting on the CDP platform on an annual basis since 2020.	In 2022, CIÉ Group was awarded a score of 'A-', being recognised by CDP for showing environmental leadership and demonstrating best practice in strategy and action on climate issues. CIÉ Group is one of only 13 respondents in Ireland that received a score of A or A- in 2022.

CDP Response	Reporting Year	Score
Climate Change 2020	2019	B
Climate Change 2021	2020	B
Climate Change 2022	2021	A-

The improvement in the 2022 CDP score reflects the changes that CIÉ Group has put in place to ensure the effective management of our carbon footprint. A concerted effort was made to quantify our Scope 3 carbon emissions from indirect sources such as purchased goods and services, water use, waste and recycling generation, employee commuting, business travel, and leased assets. We also continued to build on our climate risk identification and management framework and disclosed several key climate-related risks and opportunities faced across the Group.

Target: CIÉ Group will continue to take on board the recommendations from CDP and will aim to achieve an 'A' score on our carbon emissions management strategy.

Reporting Framework	Description	Status
UN Global Compact	The UN Global Compact is based on ten pillars that promote human rights, labour rights, environmental protection, and anti-corruption in businesses. By signing up to the UN Global Compact, CIÉ pledges to implement policies to support human rights and environmental protection across operations and the value chain.	CIÉ Group joined the UN Global Compact in 2022 to ensure that we follow best practice in adopting sustainable and socially responsible practices. CIÉ Group's progress in implementing the UN Global Compact recommendations is outlined in Decent Work and Wellbeing, Diversity and Equal Opportunity, and the list of policies in Appendix II: CIÉ Policies and UN Global Compact Alignment. CIÉ will also submit an annual public Communication on Progress to the UN Global Compact commencing in 2023 to detail our work in implementing the ten pillars in our business.
NewERA Framework for the Commercial Semi-State Sector	In 2021, the New Economy and Recovery Authority (NewERA) developed a reporting framework for the commercial semi-State sector to address climate action objectives. The reporting framework spans five commitments that respondents must sign up to: 1. Governance of Climate Action Objectives 2. Emissions Measurement & Reduction Target 3. Measuring and Valuing Emissions in Investment Appraisals 4. Circular Economy and Green Procurement 5. Climate-Related Disclosures in Financial Reporting	CIÉ Group will report to NewERA commencing in 2023 on our progress made toward the five commitments of the climate action framework. Reporting under this framework will be on a biannual basis.



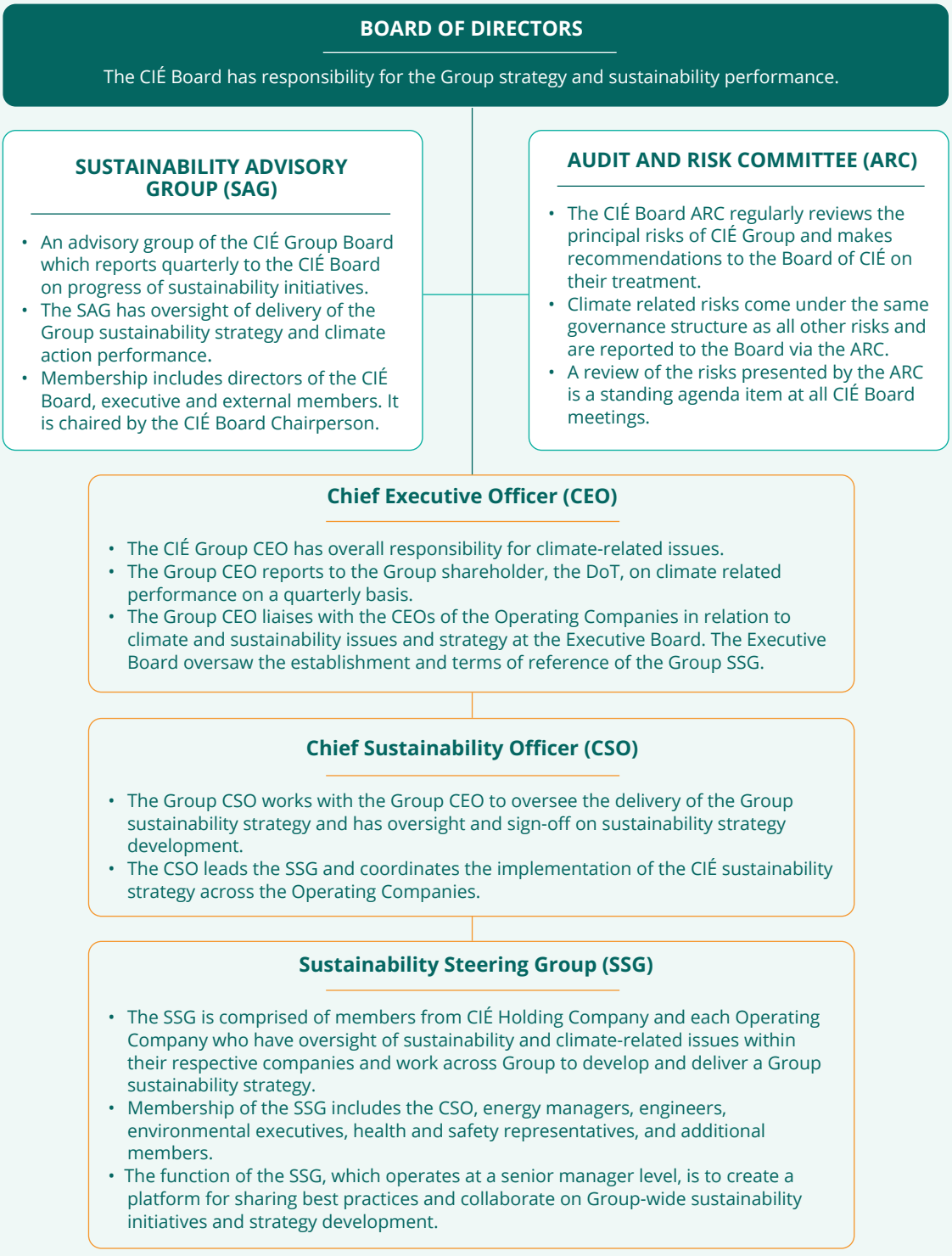
Reporting Framework	Description	Status
EU Corporate Sustainability Directive	The EU Corporate Sustainability Reporting Directive was introduced in 2021 to ensure that companies report reliable and comparable sustainability information that investors and other stakeholders need. The CSRD will include the 'double materiality perspective', meaning that companies must report about how sustainability issues affect their business and about their own impact on people and the environment.	CIÉ Group is preparing to report under the CSRD and working to implement the framework requirements into our reporting procedures ahead of the mandatory reporting period from 2025 onward. **Target: CIÉ aims to complete a gap analysis plus a double materiality assessment on the requirements of the Corporate Sustainability Reporting Directive prior to it coming into force in 2025.**
EU Taxonomy Regulations	In 2020, the European Commission established the EU Taxonomy Framework as a classification system to establish a list of environmentally sustainable economic activities. To comply with the EU Taxonomy Regulation, eligible companies will be required to identify and report on how, and to what extent, their business activities align with the Taxonomy Regulation.	CIÉ is preparing to disclose under the EU Taxonomy. To assist with this, CIÉ Group carried out Board-level training and in-depth workshops with finance and sustainability teams to continue to expand awareness at of the emerging regulatory landscape and build capacity for effective reporting under the EU Taxonomy. **Target: CIÉ Group aims to publish our alignment with the EU Taxonomy Framework by 2024.**

Reporting Framework	Description	Status
Taskforce on Climate Related Financial Disclosures	The TCFD makes recommendations for more effective climate-related disclosures and to promote informed investment decisions and strategic development. The TCFD structures climate-related disclosure around four key pillars: • Governance • Strategy (including scenario analysis) • Metrics and Targets • Risks and Opportunities	In 2021, CIÉ Group became a supporter of the TCFD framework and is working to align our climate-related reporting to the recommendations. In 2022, our focus was to further develop our climate risk management framework and prepare to carry out climate scenario analysis across the Operating Companies to help identify, define, and quantify our climate-related risks and opportunities. Details on our climate governance, scenario analysis, and climate related risks and opportunities are outlined in this report. **Target: CIÉ Group will complete scenario planning and quantification of top risks in 2023to align with the TCFD requirements.**
Science-Based Targets Initiative	The SBTi helps companies and organisations to set and achieve ambitious science-based greenhouse gas emission reduction targets (SBTs). SBTs are designed to ensure that companies do their fair share in reducing global emissions and help prevent the worst impacts of climate change.	CIÉ Group recognises the urgent need to address climate change and mitigate its impact on the planet. **Target: In 2023 we will commit to setting science-based targets for reducing our GHG emissions.**

7.2 CIÉ Group Sustainability Governance

CIÉ Group recognises the significant impact of climate change on our business operations and the environment. In response to this, we have developed our governance structure to prioritise climate-related risks and opportunities.

The CIÉ Board and Executive teams are fully committed to overseeing climate-related initiatives and ensuring that we invest in sustainable projects to achieve our climate targets. With a dedicated focus on sustainability, we will continue to drive our business forward while contributing positively to the environment and society.



7.3 CIÉ Sustainability Fund

In 2021, The CIÉ Holding Company CEO approved the creation of the Sustainability Fund to support the development of sustainability and climate related initiatives across the Group. The CEO reviews and approves projects from each Operating Company that apply for funding. The purpose of the fund is to accelerate the strategic and operational transition and mitigate environmental and biodiversity impact of Group operations.

The Sustainability Fund became operational in 2022, and in its first year, 35 sustainability projects were approved for funding. Additional projects are being evaluated for 2023 and beyond as part of a multiannual programme of strategic and operational change.

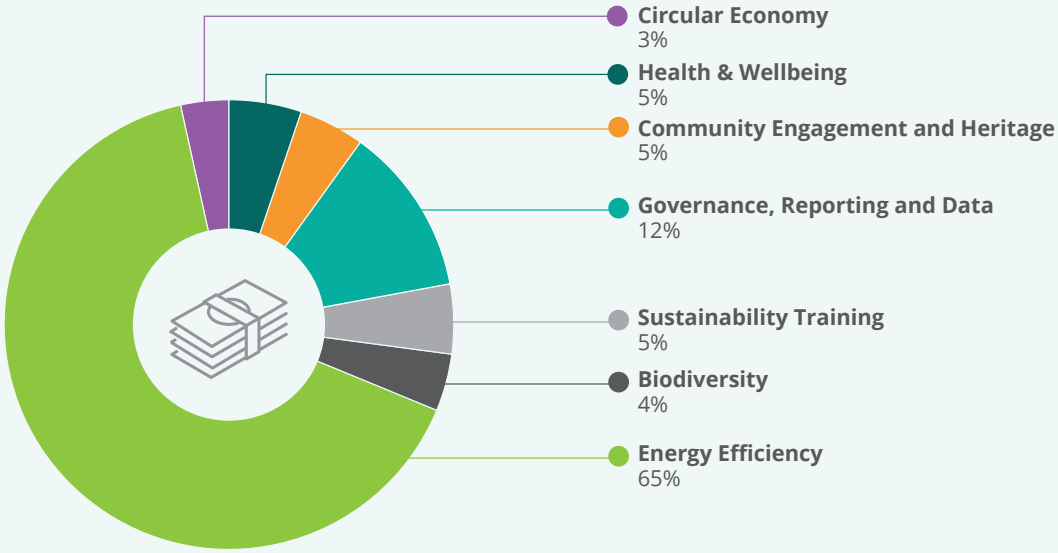


Figure 12. CIÉ Sustainability Fund breakdown by project category type.

7.4 CIÉ Tours' Commitment to Responsible Tourism

In 2022, CIÉ Tours developed a Responsible Tourism Policy with support from CIÉ sustainability. This policy reflects the company's commitment to uplift communities, destinations, and the industry in three ways:

- **Social:** Protect and share the heritage and cultural diversity of Ireland, Britain, and other destinations visited
- **Economic:** Provide economic opportunity and ensure benefits accrue to the communities where they travel, live, and serve
- **Environmental:** Work with the tourism industry and partners to support destinations while furthering national, local and industry environmental priorities

In this policy, CIÉ Tours commit to demonstrating respect for the places, people, and environments we serve while improving sustainability of their tourism ecosystem through specific behaviours in across social, economic and environmental categories.

7.5 Strategy – Scenario Analysis

CIÉ Group is working to ensure our strategy is climate resilient. We are taking on board the TCFD recommendation to identify the impact of climate-related risks and opportunities and stress-test the resilience of our business strategy and operations under conditions of a warming climate.

Within the framework, two key categories of climate risks are identified: physical risks and transitional risks. Physical climate risks refer to the direct and indirect impacts of climate change on the physical environment, arising from the increasing frequency and intensity of climate-related events such as storms, floods, heatwaves, droughts, and sea-level rise. Transitional climate risks arise from the process of transitioning to a low-carbon economy as societies and businesses adapt to mitigate climate change. These risks are associated with policy changes, technological advancements, and shifts in market preferences.

During 2022, we embarked on a comprehensive scenario analysis process to expand our climate risk management framework. This approach allows us to evaluate potential changes in the business landscape and identify the implications of climate-related risks and opportunities across our operations and value chain. By defining and quantifying risks and opportunities, we are in a position to make informed strategic decisions and integrate climate-forward thinking into our strategy.

Our work in this area began with the identification and definition of three climate scenarios, a transitional climate scenario consistent with limiting global warming to 1.5°C, a scenario demonstrating with increased physical climate risks consistent with 4°C of global warming, and a 'middle of the road' scenario incorporating both transitional and physical risks. These scenarios were constructed using inputs from the International Energy Agency Global Climate and Energy Model, Environmental Protection Agency (EPA) climate projections, the Network for Greening the Financial System (NGFS) Scenarios and the Intergovernmental Panel on Climate Change (IPCC) GHG Representative Concentration Pathways (RCP).

1 Net Zero 2050 - "The low carbon route"

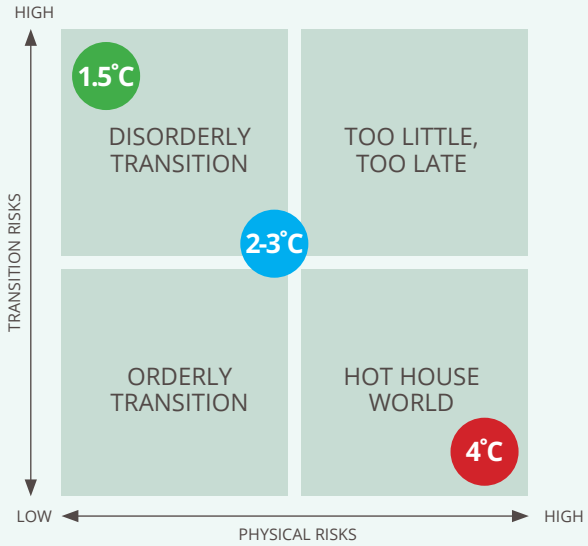
Net Zero 2050 is an ambitious scenario that limits global warming to 1.5˚C by 2100 through stringent and immediately introduced climate policies and innovation, reaching net zero GHG emissions around 2050. This scenario involves more transition risks early on but manages to limit physical risks to a minimum.

2 Delayed transition - "The middle road"

This climate scenario follows a path in which social, economic and technological trends do not shift markedly from historical patterns. The world takes action to limit emission growth but fails to cut emissions in the short term, resulting in >2˚C warming by 2050. This scenario involves several physical risks and additional transition risks after 2030.

3 No policies - "Climate off the rails"

This scenario assumes that only currently implemented climate policies are preserved. The world does not cut emission and climate change accelerates causes 2.5˚C of warming by 2050 and >4˚C of warming by 2100 bringing irreversible changes to the Earth's climate. This scenario involves little to no transition risks early on by results in irreversible and globally disrupting physical risks.



Climate scenario planning can also be organised according to the orderliness of the transition to a low-carbon economy. In an orderly transition scenario, governments, businesses, and society collaborate effectively to mitigate climate change and implement sustainable practices, bringing about an uninterrupted and well-managed shift to carbon neutrality. A disorderly transition refers to a turbulent and poorly managed shift towards a low-carbon economy. It is caused by a lack of coordination, inadequate policies, and abrupt changes that can lead to significant disruptions and financial risks. As part of our scenario analysis process, CIÉ Group uses both orderly and disorderly climate scenarios (Figure 12). as together they provide a more comprehensive and robust assessment of potential risks and opportunities associated with climate change.

Using our climate scenarios as a starting point, CIÉ has explored the possible business impacts under these different assumptions. CIÉ Group will continue to develop our scenario analysis and risk identification process in 2023. The cross-company working group will further review the most material climate risks and opportunities to CIÉ, before undertaking a comprehensive assessment across our entire operations and value chain.

1	Net Zero 2050 – "The low carbon route"
Physical impact	• Consistent with IPCC RCP2.6, i.e., global emissions decline from the short-term, reaching net zero by 2070. • Average global temperature rise of 0.9C –2.3C. • Consistent with the TCFD required "2°C or lower scenario".
Policy	• Assumed that the carbon tax will be €100/tonne by 2030 and that appropriate legislation in place to increase the annual rate of carbon tax until at least 2030 to achieve this. • A suite of taxation incentives to promote the uptake of electric vehicles, including substantial Vehicle Registration Tax relief and Benefit-in-Kind exemptions. • The implementation of a series of progressive green budgeting reforms, as well as strict regulatory requirements e.g., recycling and energy efficiency standards, and increased monitoring and reporting obligations.
Technology	• 100% battery electric vehicle purchases by 2030. • Other technological advancements in resource recovery and energy efficiency are projected to happen at a more rapid pace.
Market	• A total change in modal shift as outlined in the CAP and sustainable mobility policy, where people choose public transport and active travel over the private car. • High demand for low-carbon products or services to reduce emissions, this could provide CIÉ with a competitive advantage/disadvantage depending on whether the business can meet the market demand. • Government incentivisation of demand to switch to times of high wind or solar by passing through price signals to end consumers (for example water heating, and EV charging).
Stakeholders	• High demand from investors and lenders for climate mitigation or resilience investments.

2	Delayed transition – "The middle road"
Physical impact	• Consistent with IPCC RCP4.5, i.e., global emissions continue to rise to 2040, plateau, and then decline. • Average global temperature rise of 1.7°C - 3.2°C.
Policy	• A CO2 emission-based Vehicle Registration Tax and motor tax regime for private motor cars that imposes a higher tax liability on vehicles with higher emissions. • Government continues to monitor and review the carbon tax increases as legislated in the 2020 Finance Act. • Government also considers a number of reforms to the taxation system under relevant tax heads from an environmental perspective. • Emissions ceilings met and electricity achieves average annual emissions reduction of circa 7.5 MtCO2e from 2022 to 2025.
Technology	• 100% battery electric vehicle purchases by 2035. • Major acceleration and increase in onshore wind turbines across the country, transformation of land use from activities such as agriculture to solar PV, and a previously unseen level of electricity network upgrades and construction will be required.
Market	• An increase in modal shift as outlined in the sustainable mobility policy and CAP, where people often use public transport and active travel over the private car. • The incentivisation of flexible demand that could facilitate the partial electrification of industry and transport. • Increased uptake in EVs due to incentives for charging at lower night rate and EV grants.
Stakeholders	• Increased stakeholder expectations concerning climate mitigation efforts from organisations which could lead to reputational gain/damage depending on CIÉ Group's rate of transition.

3	No policies – "Climate off the rails"
Physical impact	• Consistent with IPCC RCP8.5, i.e., global emissions continue to rise to 2100. • Average global temperature rise of 3.2°C – 5.4° C. • Consistent with the TCFD required scenario for "more extreme physical risks".
Policy	• Little to no policy action on climate change. • The Paris Agreement fails as major economies withdraw. • Targets and goals in the Climate Action Plan and Low Carbon Development (Amendment) Act 2021 are not met. • Irish sectoral emissions ceilings not met and therefore carbon budgets not met. • Failure to meet 51% reduction in emissions by the end of this decade, Ireland does not meet its international and EU climate. • Commitments.
Technology	• No major switch from fossil fuel in transport sector to options such as electrification and other low carbon alternatives. • Plans to increase the rollout of rural public transport through Connecting Ireland, and public transport services through Bus Connects, expand rail services and infrastructure in major urban centres, and an increase in walking and cycling investments not met.
Market	• Consumer and business purchasing behaviour is driven by quality/price ration irrespective of the carbon footprint of the product or service.
Stakeholders	• Climate change is not projected to be an important focus of investors or lenders.

7.6 Risk Management

Each CIÉ Operating Company has identified several climate-related risks and is managing them through our Risk Management Information System (RMIS). As we further establish our scenario analysis process, additional risks are expected to emerge and be included in the RMIS along with any mitigating actions to help reduce the risk. An initial analysis to identify and quantify our climate risks has been carried out, and this will continue to evolve and be reported on as the analysis develops. Select climate-related risks that CIÉ Group is currently managing through the RMI are summarised below.

Risk	Description	TCFD Category
Climate change/ increasing volatility of weather	Some of Iarnród Éireann's network runs adjacent to the coast. Over time, the continued viability of these routes may be threatened by coastal erosion, which could cause bridge collapse, embankment washout, or overtopping of the railway by the sea. Iarnród Éireann is carrying out the East Coast Railway Infrastructure Protection Project (ECRIPP) Programme to mitigate against the effects of coastal erosion.	Physical risk – Chronic
	The physical impacts of climate change are expected to cause an increase in the frequency and intensity of extreme weather events in Ireland. There is an increased risk of a major service disruption or accident due to severe weather.	Physical risk – Acute
New Technologies	The planned bus and rail fleet transition to zero emission vehicles and low carbon alternative fuels carries a risk associated with the installation of new charging infrastructure, depot upgrades, increased costs, training requirements, and safety risk. There is also uncertainty around the availability of low emission technology that would meet the required demand.	Transition risk – Technological
Resource Security	As societies shift towards a decarbonised energy system, the power sector faces new challenges due to increased reliance on electricity. The share of variable renewables in electricity generation will rise, requiring investment and transformation of the power system to balance the demands on the electric grid. The increased share of renewable electricity may lead to challenges in grid stability and reliability, which represents a risk given CIÉ Group's significant energy requirements.	Transition risk – Technological
Delays in Achieving Sustainability Targets	Ireland has committed to ambitious national climate targets and public sector energy efficiency targets. There is a risk of failing to achieve these Government targets which would expose CIÉ Group to possible reputational impacts.	Transition risk – Reputational
Reputational Impacts	There may be increased stakeholder concern and expectations for climate mitigation efforts from CIÉ Group, including responsible/ethical sourcing and provision of low carbon logistics solutions leading to possible reputational damage and market loss if the Group fails to meet these expectations.	Transition risk – Reputational

Risk	Description	TCFD Category
Capital Investment Requirements	A rapid series of capital investment projects are required to ensure the decarbonisation of the fleet and decrease emissions by 51% by 2030. There is a risk of a delay in delivering these capital investment improvements due to a lack of funding or project management delays.	Transition – Market
	There is a significant financial cost associated with the necessary capital investment projects required for decarbonisation. There is a risk that passenger and employee facility capacity investment does not match economic upturn and decarbonisation needs.	Transition – Market
Supply Chain Disruptions	The global requirement for critical minerals required for the production of clean energy technologies is expected to triple by 2050. The supply of minerals is often concentrated geographically and may be more vulnerable to regulatory changes, trade restrictions, or political instability. High or volatile prices for minerals will affect the supply of clean energy technologies and may delay CIÉ Group's procurement of zero emission vehicles.	Transition risk – Market
Resource Costs	Regulatory and market forces may lead to an increased cost of energy and raw materials for equipment and assets leading to higher capital and operational expenditure across CIÉ Group.	Transition risk - Market
Carbon Pricing Mechanisms	The use of carbon-pricing mechanisms in Ireland could represent a financial impact for CIÉ Group if there is a delay in the Group's transition toward low-carbon energy sources.	Transition risk – Policy and legal
Climate-Related Regulations	The introduction of climate-related requirements (e.g., Climate Action Plan targets, fuel efficiency standards, GHG monitoring and reporting requirements) may lead to additional costs for compliance and may have implications for capital allocation decisions and potential costs increases from failure to meet new requirements.	Transition risk – Policy and legal

There are opportunities for CIÉ Group in the transition to a greener economy. The planned reduction in emissions in the transport sector and the increase in provision in public transport services as outlined in the CAP and the Sustainable Mobility Policy represent a significant opportunity for Group services, some of which are outlined in the table below. An initial analysis to financially quantify climate opportunities has been carried out, and this will continue to evolve and be reported on as the analysis develops.

Opportunity	Description	TCFD Category
Increased access to green funding to support green initiatives	CIÉ having access to green funding through a variety of capital providers would allow projects to be undertaken to support the decarbonisation of its building stock while also providing for in house generation.	Market
	Decreased operational expenditure through generation of renewable energy and/or purchase of power purchase agreement. Will also provide increased energy resilience and independence.	Energy source
Modal Shift	An increase in modal shift as outlined in the sustainable mobility policy, where people choose public transport and active travel over the private car.	Market
Greater resource efficiency	Advancement in resource efficiency technologies and its associated cost reduction leading to Increased uptake of more energy efficient buildings and equipment as well as use of more efficient modes of transport.	Resource efficiency
Congestion charges increasing uptake of public transport	Market shift towards a low carbon economy, including increased incentivisation from government for lower emission transport, leading to increased uptake of public transport services.	Policy and legal
Resilience to physical climate risks	Increased organisational resilience to physical climate risks leading to minimised disruptions to networks during extreme climate events thus enabling market positioning as a more reliable transport option in times of crisis.	Resilience
Last mile opportunities	Partnership opportunities to provide customers with last mile 'green' transport.	Market
Residential / housing developments	Potential development of housing above electric garages and in other available spaces around 'greener' infrastructure.	Market
Diversification and proactive market engagement	Diversifying activities through accessing new markets with innovative low carbon service offerings as well as proactively engaging with customers and the wider community in supporting their transition to a low carbon economy leading to Diversified revenue streams and market access as well as strong market engagement.	Market

In our initial analysis of CIÉ Group's climate related risks and opportunities, we developed a heatmap (Figure 13) showing the most powerful impacts from climate change on CIÉ's business operations and value chain. Three key climate risks and two opportunities are analysed using the heatmap, with the degree of financial impact included for each climate scenario. The risk with the highest projected impact is the risk of high capital costs for procuring low or zero emission vehicles as we transition our fleets. The most significant opportunity for CIÉ Group is the potential for the generation and purchase of renewable energies, representing potential long-term cost savings and increased energy security. Throughout 2023 the scenario analysis working group will quantify the financial impacts of our top risks and opportunities.

This heatmap will allow CIÉ Group to map out and prioritise the potential risks and opportunities associated with climate change, and it will be added to over time with each iteration of the scenario analysis process.

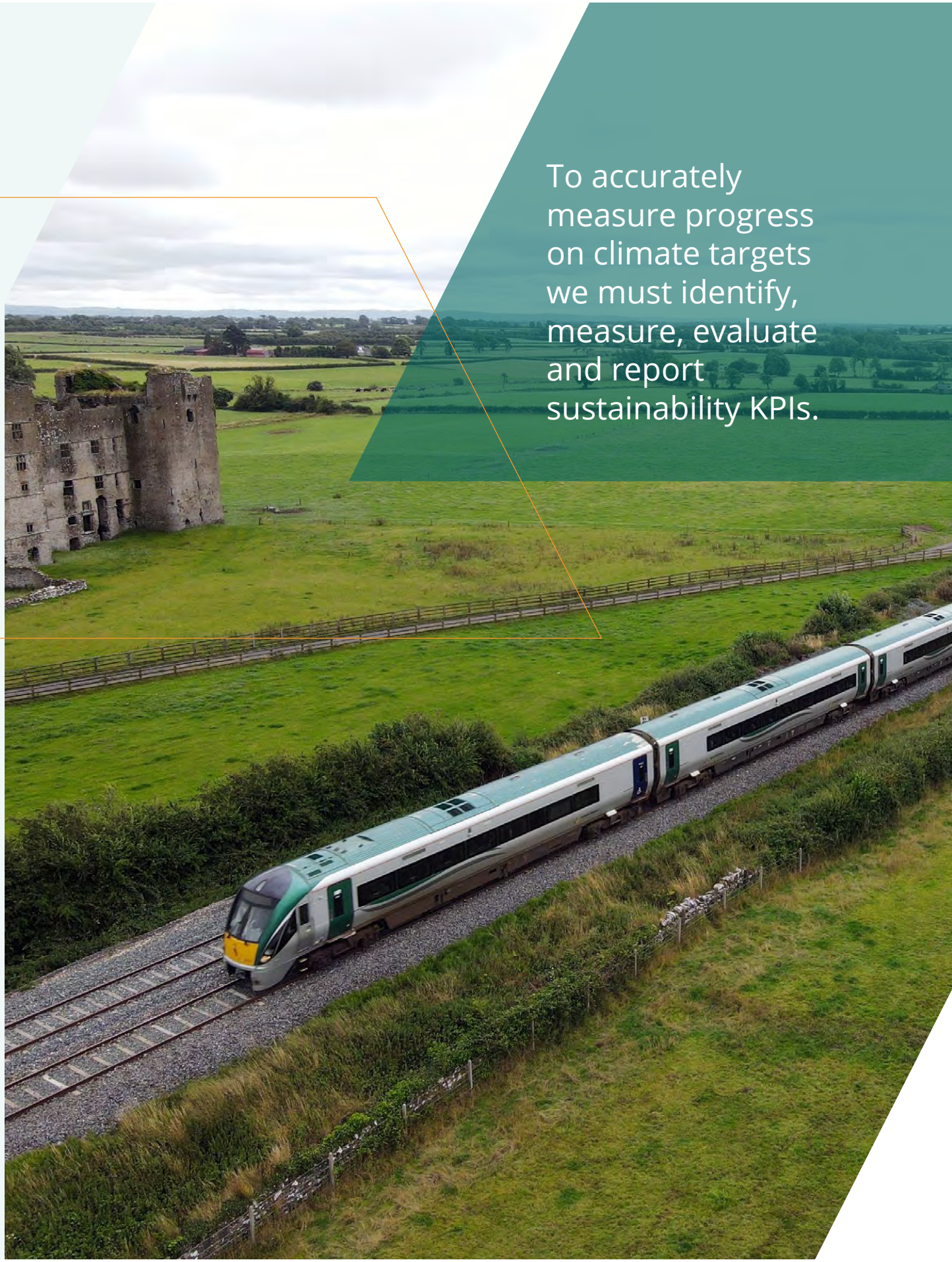
Scenarios:
NZ = Net Zero; 1.5˚C increase
DT = Delayed Transition; 2-3˚C increase
COR = Climate off the Rails; 4˚C increase

		Low	Minor	Moderate	Major	Severe
Transition risk						
Physical risk	Risk					
Opportunity	Opp.					

Colour coding is based on inherent risk and indicative value

	Estimated financial impact (€m)								
	2030			2040			2050		
	NZ	DT	COR	NZ	DT	COR	NZ	DT	COR
R1a Risk of high cost of low/zero emission vehicles (CapEx)									
R1b Risk of high cost of low/zero emission vehicles (OpEx)									
R2 Carbon pricing									
R3 Fuel costs									
O1 Increase access to green funding to support green initiatives									
O2 Generation and purchase of renewable energies									
Flooding									
Heavy precipitation									
Changing temperatures									

Figure 13. Heatmap showing the degree of impacts of key climate-related risks and opportunities across CIÉ Group under each climate scenario.



To accurately measure progress on climate targets we must identify, measure, evaluate and report sustainability KPIs.

SECTION 8

Action Area: Low Carbon Transition

SDG	SDG TARGET	
7 AFFORDABLE AND CLEAN ENERGY	**7.2**	By 2030, increase substantially the share of renewable energy in the global energy mix.
	7.3	By 2030, double the global rate of improvement in energy efficiency.
	7.a	By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.
13 CLIMATE ACTION	**13.2**	Integrate climate change measures into policies, strategies and planning.

Our Low Carbon Targets and Objectives

Decrease our GHG emissions by 51% by 2030. This target aligns with the CAP 2023.

Set and validate our climate targets by the SBTi.

Publish a decarbonisation pathway outlining our estimated energy use and greenhouse gas emissions out until 2035+ by 2023.

100% electric or hybrid vehicles in the Bus Éireann road vehicle fleet by 2030.

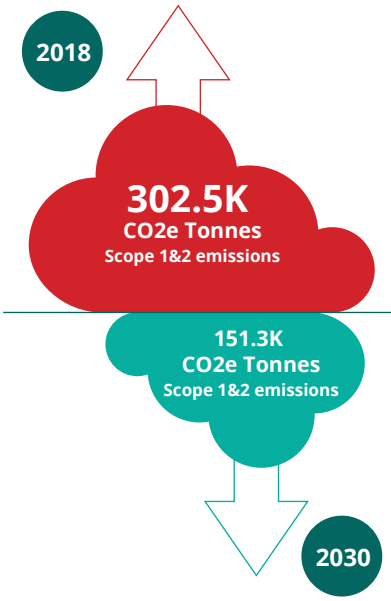
100% electric vehicles in the Iarnród Éireann road vehicle fleet by 2030.

Complete a comprehensive Scope 3 carbon emissions scoping exercise by 2023.

Our primary objective is to transition to a low carbon and zero emission fleet, significantly reducing our reliance on fossil fuels. CIÉ Group is working closely with our stakeholders to deliver an electrified public transport system with zero tailpipe emissions. These large scale transport programmes and infrastructure improvements, in conjunction with the NTA, form the basis of a national redesign of the public transport network to help encourage modal shift and reduce reliance on private car use.

We work closely with the SEAI to quantify CIÉ's 'gap-to-target', the difference between our GHG emissions and our climate targets. Setting science-based targets will feed into our gap-to-target analysis and ensure our targets are fully aligned with the goals of the Paris Agreement.

The Decarbonisation Challenge



Increasing CO2e Emissions:

- Increased service frequencies (DART+, BusConnects)
- Increased fleet size
- Increased volumes of infrastructure works to support fleet expansion and electrification
- Increased volume of rail freight through reopening of Foynes-Limerick railway line
- Electric car charging at stations

Initiatives to reduce CO2e Emissions:

- Upgrades of existing train diesel engines with fuel saving technology
- Electrification and roll out of electric, hybrid, and hydrogen powered buses and train fleets
- Use of fuel additives and diesel fuel alternatives (biofuels, Envirox fuel additive, HVO)
- Building energy efficiency improvements
- Appliance energy efficiency improvements (lighting, lifts, escalators, boilers, etc)
- Transition to electric and hybrid vehicles for the road fleet
- Renewable energy sources (behind the meter energy generation, Power Purchase Agreement)

8.1 Bus Fleet Transition

8.1.1 BusConnects

BusConnects is a central part of the NTA and Government's strategy to make public transport more accessible. The programme aims to provide an enhanced bus network and more reliable, efficient, and greener bus services across Ireland. BusConnects includes an electrification programme that will see major bus networks operated by zero emission buses by 2035. The BusConnects programme will be rolled out to Dublin, Cork, Galway, Limerick and Waterford.

8.1.2 Bus Átha Cliath Fleet Transition

By 2030, BusConnects Dublin will deliver 230km of bus corridors to provide safe, accessible and efficient public transport, while reducing traffic congestion, noise and air pollution. The size of Bus Átha Cliath's fleet will be increased and converted to zero emission vehicles by 2035 to meet the rising demand for services. Bus Átha Cliath's future zero emission fleet will be expected to save an estimated 30,000 tons of CO2 annually and supports the targets outlined in the CAP.

Transition to Zero Emission Buses in Dublin

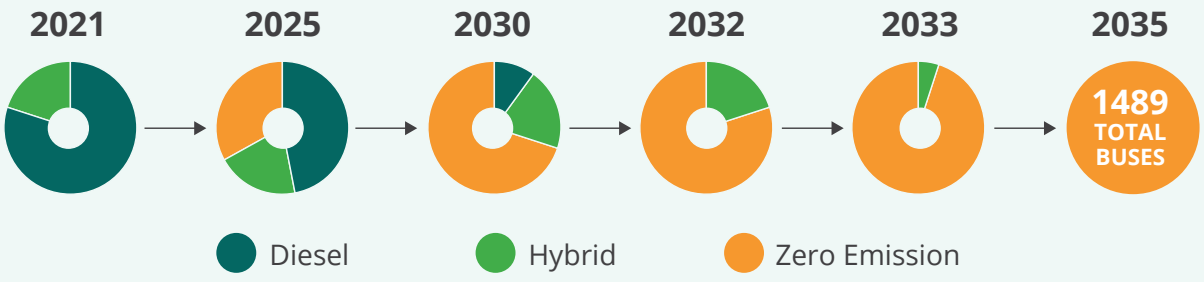


Figure 14. The NTA transition timeline to zero emission buses in Dublin.
Source: NTA Greater Dublin Area Transport Strategy 2022-2042

In 2022, the NTA announced an order for 100 double-deck battery-electric buses to be deployed by Bus Átha Cliath as part of a framework agreement that will allow for the procurement of additional electric buses over the next five years. The new battery electric buses are expected to enter service commencing in Q4 2023 and will supplement the 172 hybrid buses already in operation..

8.1.3 Bus Éireann Fleet Transition

The hybrid urban bus fleet, operated by Bus Éireann since 2021, is comprised of 61 double deck buses serving Galway City and Limerick. The hybrid buses emit 30% less carbon emissions than conventional diesel buses.

Bus Éireann, with the support of the NTA, undertook preparatory work in 2022 to launch the first fully electric bus service in Ireland. Subsequently, in early 2023, eleven battery-electric single-deck buses were deployed in Athlone town. The conversion to an electric fleet required a comprehensive upgrade of the bus depot to install new charging infrastructure, including a substation, and will contribute to a quieter and cleaner town centre in Athlone.

Orders were placed in 2022 for 20 double-deck battery electric buses in 2022 as part of an NTA framework agreement that will allow for the procurement of additional electric buses over the next five years. These buses will launch in Limerick in late 2023 and will save an estimated 1,800 tonnes of tailpipe carbon emissions per year.

Under the Climate Action Plan, Bus Éireann and the NTA plans to deliver a 100% zero tailpipe emissions urban bus fleet in Dublin, Cork, Waterford, Limerick and Galway by 2035, and both are working towards developing solutions to commence the transition of the non-urban and longer distance coach fleet by the end of the decade.

8.1.4 Developing Hydrogen in Transport

CIÉ Group supports the domestic production and use of green hydrogen to support national energy security and provide a zero emission fuel for the hard-to-decarbonise transport sector.

CIÉ and Bus Éireann are working with partners to pilot zero emission fleet technologies as part of our commitment to reduce our carbon emissions. The current strategy to transition our fleets relies initially on BEV technology to replace fossil fuels, however, the use of FCEVs powered by green hydrogen is also being explored as an alternative zero emission fuel. Hydrogen in transport would see integration of the transport and energy sectors, providing a zero-emission fuel for the traditionally hard to decarbonise transport sector and a storage solution for curtailed energy.

Bus Éireann is testing the use of hydrogen technology in transport as a complementary energy vector to battery electric vehicles. The longer driving range and short refuelling times, means hydrogen FCEV represent a viable alternative to battery electric buses, particularly on longer inter-urban services. Following the initial launch of Ireland's first double deck hydrogen buses in 2021 as part of an alternative fuels technology pilot with the NTA, Bus Éireann has continued to operate the three buses along the northern Dublin commuter corridor throughout 2022, reliably amassing over 100,000 tailpipe emissions-free kilometres using the hydrogen fuel cell technology.

CIÉ Group has been working with the energy sector, stakeholders, academia and international transport leaders to develop a hydrogen value chain in Ireland and to plan for the operational transformation of managing several zero emission fleet technology services.

8.2 Rail Fleet Transition

8.2.1 DART+ Programme

The NTA DART+ Programme is a large-scale network rail expansion project that will revolutionise rail travel in the GDA. DART+ is being implemented by Iarnród Éireann as part of the NDP, Project Ireland 2040 and the NTA's Transport Strategy for the GDA (2016-2035). It will see the DART network grow from its current 50 km in length to over 150 km, helping to boost regional connectivity and making public transport the preferred option for more people.

The DART+ Programme will lead the decarbonisation of an expanded DART network through the construction of new overhead electric lines and the transition from diesel-powered train carriages to electric and battery-electric powered carriages. Through the expanded the DART network, Iarnród Éireann will deliver additional zero-tailpipe emission journeys for passengers while reducing noise and air pollution across the GDA.

"We are [investing in the DART+ Programme] because the scale of change we need to make is beyond compare - to provide better, more frequent and more accessible transport choices to many more people and to meet our emissions targets."

Minister for Transport Eamon Ryan

In December 2021, Iarnród Éireann, supported by the NTA, signed a commuter fleet framework agreement with French company Alstom to deliver 750 electric/battery-electric train carriages over a ten-year timeframe. In November 2022, Iarnród Éireann announced the order of 90 additional new battery-electric train carriages following an initial order of 95 electric and battery-electric train carriages in 2021. The new carriages will begin entering service from 2025 onwards, increasing the capacity of the DART network.

In the draft GDA Transport Strategy 2022-2042, the Public Service Obligation (PSO) bus and commuter rail fleet in the Dublin Metropolitan Area will be 100% electric and zero-emission by 2035. The procurement of the new battery electric train carriages marks a significant step towards that objective.

8.2.2 Use of Biofuels

Prior to 2023, CIÉ Group's diesel supply chain used B0 diesel fuel which does not contain any element of biodiesel. Following engine compatibility trials, biofuel was approved for use at each Operating Company in 2022 and an intensive procurement process was carried out to allow for the introduction of B7 biofuel (7% concentration) across the CIÉ Group in early 2023.

The use of biofuels in CIÉ Group's supply chain supports the objectives of the EU Renewable Energy Directive, which requires that a certain proportion of the energy used in transport to come from renewable sources. The Renewable Transport Fuel Obligation oversees the use of biofuels in transport in Ireland and sets out an obligation that suppliers of road transport fuels must include a certain percentage of biofuels across their general fuel mix. This blend rate increases on an annual basis with the aim of shifting from 100% fossil-based fuels to more environmentally sustainable biofuel blends.

CASE STUDY

Case Study: Hybrid PowerPacks

Iarnród Éireann is implementing several decarbonisation projects making use of the opportunities of advances in low-carbon technology.

Iarnród Éireann commenced design works for its ICR Hybrid Drive Trials in 2021 to test the use of hybrid technology in its intercity rail fleet. Supplementing the fleet's diesel engines with Hybrid PowerPacks will produce fuel savings and reduce GHG emissions, air pollution, and noise.

Testing and commissioning of the powerpacks was carried out in 2022. In 2023, the Hybrid Drive Trial will continue with six rail cars scheduled to be fitted with PowerPacks. It is estimated that the hybrid trains will provide a 10% reduction in carbon emissions resulting in a savings of 3,064 tonnes of carbon annually by 2025. The hybrid drive technology will also produce less air pollutants and noise. The performance of the PowerPacks will be monitored throughout 2023 with the view of extending this technology further across the fleet to reduce overall carbon emissions.

SECTION 9

Action Area: Energy Management

SDG	SDG TARGET
7 AFFORDABLE AND CLEAN ENERGY	**7.2** By 2030, increase substantially the share of renewable energy in the global energy mix.
	7.3 By 2030, double the global rate of improvement in energy efficiency.

Our Energy Efficiency Targets and Objectives

Increase energy efficiency by 50% by 2030. This target aligns with the SEAI's energy efficiency targets for the public sector.

Continue to identify sites that would benefit from on-site renewable electricity generation and implement this technology to reduce our demand on Ireland's electric grid.

Implement a corporate power purchase agreement (PPA) to source our electricity from renewable sources.

Pursue opportunities to upgrade our buildings to be more energy efficient.

Iarnród Éireann aims to source 100% of traction and utility electricity from renewable sources by 2030.

Develop a Group energy strategy to assess potential for energy, fuel and gas management by 2024.

Iarnród Éireann to upgrade 140 of their existing buildings to minimum Building Energy Rating (BER) B standards by 2030.

The reduction of carbon emissions required by Ireland's CAP will be supported through energy efficiency measures, demand reduction, and the use of on-site renewables. By improving energy efficiency and incorporating renewable energy sources, CIÉ Group is actively working towards a low-carbon pathway that aligns with our long-term climate and energy targets.

Bus Átha Cliath, Bus Éireann, and Iarnród Éireann submit their annual energy usage to the SEAI M&R platform to verify the reported figures and identify any improvements in energy efficiency made throughout the year. The M&R system provides supports for organisations to plan for systems transformation and develop a glidepath showing energy efficiency and carbon emissions until 2030 and 2050.

CASE STUDY

Case Study: LED Lighting Upgrades

CIÉ Group is looking for opportunities to upgrade to LED lighting where possible, aiming to reduce energy consumption by up to 14% by replacing conventional lighting.

Bus Éireann and Iarnród Éireann have already implemented LED lighting systems across several stations and depots, with further lighting upgrades scheduled in 2023. Bus Éireann has successfully conducted lighting upgrades across five sites, leading to an estimated carbon savings of approximately 25 tonnes per year. Similarly, Bus Átha Cliath has planned a building survey across eight locations to identify specific retrofit requirements and will commence lighting upgrades in 2023 following the results of the survey. This initiative is projected to save approximately 18 tonnes of carbon per year. The newly installed lighting systems will also include controls to enable automation and reduced consumption in unoccupied areas.

CASE STUDY

Case Study: Power Management

The CIÉ Group IT Department is leading a Workstation Power Management project that will collect data on computer energy usage, apply custom settings and allow the IT Department to evaluate power usage and power cost savings in CIÉ. The data will be used to guide improvements that can then be implemented across the Group and will assist the IT Department to improve the efficiency of computer use and reduce energy demand.

CASE STUDY

Case Study: Phibsboro Solar PV System

Bus Átha Cliath aims to increase the share of renewable energy used across their operations and improve energy efficiency through the introduction of energy saving technology. In 2021, a 51 kilowatt peak solar PV system was fitted on the roof of the Phibsboro bus depot to generate green electricity for the site. In 2022, the system generated approximately 8.7% of the site's electricity usage (46,511kilowatt hour (kwh)) of renewable electricity, saving an estimated 15.8 tons of CO_2 emissions. Bus Átha Cliath will evaluate the results of this project with the aim of introducing on-site renewable energy generation across additional sites.

CASE STUDY

Case Study: E-Bike Pilot

Bus Átha Cliath partnered with Voi Technology to launch a 12-month sustainable transport pilot project for employees. In June 2022, Voi provided a fleet of 20 e-bikes for Bus Átha Cliath employees to use when travelling between the eight bus depots located across Dublin. Opting to travel by e-bike over a private car reduces carbon emissions, air and noise pollution, and traffic congestion. The e-bike usage data will provide insights to help support customers in choosing how to travel on their first- and last-mile journeys.

SECTION 10

Action Area: Biodiversity

10

SDG	SDG TARGET
	**15.5** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species.
	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning and development processes

Our Biodiversity Targets and Objectives

Plant 100 acres of native trees on non-operational lands by 2030.

Identify additional lands to use for biodiversity preservation by 2024.

Support the delivery of the All-Island Pollinator Plan by creating pollinator-friendly spaces across our stations and depots.

As one of Ireland's largest landowners, CIÉ Group is seizing the opportunity to protect the health of our ecosystems by investing in native planting across the network and instituting biodiversity programmes and pollinator plans. The work that CIÉ Group has done to preserve local biodiversity aligns with the aims of the National Biodiversity Action Plan 2017-2021 and the upcoming National Biodiversity Plan 2022-2026, which strive for shared responsibility for the conservation of biodiversity in Ireland by all sectors.

CASE STUDY

Case Study: Biodiversity Guidelines

In 2022, Iarnród Éireann published their set of biodiversity guidelines for infrastructure staff as part of their pledge to minimise impacts on and maximise benefits to the environment. With over 2,200 km of railway network traversing through a variety of landscapes, Iarnród Éireann is seizing the opportunity to sustainably manage an extensive range of habitats, species, and ecosystems.

Biodiversity Guidelines In Action
Iarnród Éireann seeks to ensure that local plant and wildlife is protected during each phase of a project or development:

Embankment planting

After a recent renewal project in Greystones Station left an embankment bare, the area was planted with native Irish wildflower seeds to provide food for local pollinators and restore the embankment after maintenance works were completed.

Capture and release of aquatic life

When Iarnród Éireann staff carried out repairs to a bridge abutment earlier in 2022, they ensured that local wildlife was not harmed by creating a dry cell, capturing fish, and releasing them safely upstream away from the worksite.

CASE STUDY

Case Study: 'Dublin Buzz' Beehives

The 'Dublin Buzz' beehive initiative was introduced in 2021 with the installation of a beehive in Phibsboro depot. The initiative has continued to grow and in 2022 a second beehive was set up in a previously unused plot at Broadstone depot. Wildflower planting has been incorporated around the hives to a provide a food source for the bees, and the hives will provide a home for up to 150,000 bees in the summer months. 'Dublin Buzz' supports native honeybees and urban biodiversity and will also provide a learning opportunity for Bus Átha Cliath employees who wish to get involved in beekeeping.

CASE STUDY

Case Study: Pollinator Plans in Transport Corridors

Iarnród Éireann is committed to supporting native biodiversity, and in 2019 helped develop the Pollinator-friendly management of transport corridors strategy under the All-Ireland Pollinator Plan.

To support the objectives of the plan, Iarnród Éireann is rolling out pollinator plans across all railway stations. The programme will involve installing pollinator enhancement infrastructure along the rail network at both rail stations and in adjacent communities. There are currently 47 stations that have adopted pollinator programmes and there are plans to complete this programme across all 145 operational stations of the network by 2030.

CASE STUDY

Case Study: Biodiversity Gardens

Bus Átha Cliath, Bus Éireann, and Iarnród Éireann are supporting employee access to nature and biodiversity through the installation of biodiversity gardens at several rail stations and bus depots. These gardens include wildflower and tree planting around wellbeing areas that employees can use during their downtime. These areas will be rolled out across city centre and outer city locations, supporting awareness of native biodiversity and employee physical and mental wellbeing.

Bus Éireann is dedicated to supporting community biodiversity gardens and schools across Cork city through their involvement in the Cork Green Spaces for Health Initiative. In 2022, they also launched a community garden in Constitution Hill in collaboration with Phibsboro Tidy Towns. The garden features a variety of native plants and flowers that provide habitat and food for solitary bees.

CASE STUDY

Case Study: Swift Tower and Nest Boxes

Iarnród Éireann, working in collaboration with IRD Dullhallow, constructed a swift tower in Rathmore Station, Co. Kerry, to provide a nesting site for local swift populations. Additionally, following a consultation with Birdwatch Ireland, Bus Éireann installed swift nest boxes in their Capwell depot to support Cork city's existing swift populations.

Conservation efforts such as the installation of the swift tower and nest boxes are critical as swifts return to the same nest site every year for their entire lives.

SECTION 11

Action Area: Circular Economy

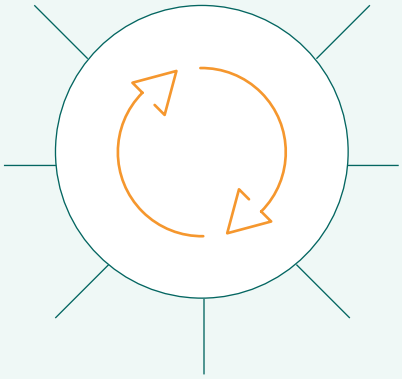
SDG	SDG TARGET
6 CLEAN WATER AND SANITATION	**6.4** By 2030, substantially increase water-use efficiency across all sectors.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	**12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse. **12.7** Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

Our Circular Economy Targets and Objectives

Deliver water savings initiatives across our operations in areas of high-water use.

Complete a water audit and water mapping by 2023 to identify all water usage across CIÉ Group.

Develop a water stewardship programme and training across CIÉ Group.



Continue to deliver circular economy initiatives across our operations to address waste streams such as ballast, hazardous wastes, and electronic waste.

Set a target for water usage by 2024.

Continue to engage with our top suppliers on sustainability performance and support the market shift toward sustainable products and services.

Increase the recycling rate across CIÉ Group Bus Éireann and Iarnród Éireann target a 70% recycling rate by 2030.

CIÉ Group is working to maximise circularity across our operations and value chain by minimising the waste of plastics, packaging, electronics, construction and building materials, and water, and increasing the recycling rate across each Operating Company. The CIÉ Group's circular economy initiatives also help to support the aims of Irish and European environmental legislation.

CASE STUDY

Case Study: Engine Coolant Reuse Programme

The Iarnród Éireann Chief Mechanical Engineering Department is investigating options for minimising hazardous waste. Iarnród Éireann is testing the use of a centralised coolant recycling system that will reduce the amount of coolant required and minimise the need for additional resources. The system will be carefully monitored and any issues will be addressed prior to extending the system to other rail depots.

CASE STUDY

Case Study: Sleeper Reuse Study

Iarnród Éireann uses concrete sleepers along the hundreds of kilometres of their network to provide support to the railway tracks. To avoid wasting used concrete sleepers, they are exploring options for reuse. The used sleepers are removed from and evaluated to determine if they can be repurposed for another railway application, and if so, they are stored for reuse. For damaged sleepers, Iarnród Éireann has a study underway to assess potential secondary uses such as on private paths, agricultural roads or retaining walls.

CASE STUDY

Case Study: Reverse Vending Machine Trial

Bus Éireann has taken an innovated step towards reducing plastic waste by installing a Reverse Vending Machine (RVM) pilot project in their Busáras and Letterkenny depots. The beverage containers that are collected from the RVMs are segregated from the waste stream and sent for recycling instead of being processed as general waste. In the first six months of the pilot, the RVMs collected over 1,400 bottles and cans. The 12-month pilot also has a charity element, with €6,000 being donated to Grow Mental Health for the duration of the trial.

The results of the pilot will be used to assess the potential rollout to additional Bus Éireann locations ahead of the forthcoming government Deposit Return Scheme.

CASE STUDY

Case Study: Conscious Cups Campaign

The Cork Bus Depot Canteen launched a "Conscious Cups Campaign" with the objective of promoting the reuse of coffee cups over single-use cups by providing incentives for behavioural change. Customers who bring reusable cups receive a 30% discount on coffee or tea, encouraging the use of reusable cups. This is a permanent initiative and Bus Éireann hopes to expand it to the Broadstone canteen in early 2023.

CASE STUDY

Case Study: Laptop Donation Programme

The CIÉ Holding Company launched a Laptop Donation Programme in 2022, where useable end-of-life staff laptops were wiped and donated to charitable organisations instead of being sent for recycling or to landfill.

11.1 Sustainable Procurement

Sustainable procurement is an approach to purchasing products and services that takes into account the economic, environmental and social impacts of an organisation's buying choices. CIÉ Group has introduced targets for sustainable procurement through our Responsible Purchasing Policies and has delivered training across the Group to facilitate sustainable procurement. CIÉ Group will continue to engage with our suppliers and wider value chain to ensure they are managed for sustainability.

In 2022, Bus Éireann commenced a targeted supplier engagement programme in 2022 to promote continual sustainability improvement of the market. The Bus Éireann procurement department has a Responsible Purchasing Policy in place and has also developed a sustainability checklist to guide procurement executives when developing tenders.

In 2022, Iarnród Éireann introduced a new Responsible Purchasing Policy with a target of incorporating sustainability selection criteria in 100% of their tenders by 2030. Iarnród Éireann is well on track to meet this target and in 2022, 93% of their tenders contained sustainability selection criteria.

In 2022, CIÉ Tours developed a sustainability policy and commenced a stakeholder engagement exercise to better understand the position of the market on sustainable tourism.

CASE STUDY

Case Study: Consumables Review

Iarnród Éireann's Central Contracts team and their Environmental team have begun a review of various consumables associated with the central cleaning contracts with a view of reducing consumption volumes. This includes several types of soft products (paper towels, toilet paper) and cleaning product containers. The project team has identified environmentally friendly options that should reduce consumption, such as conservative dispensers, sustainable paper type, and switching to tea towels. The project implementation is planned for early 2023.

11.2 Water Management

Water management and the efficient use of our natural resources play a crucial role in promoting the circular economy. By reducing water waste and maximising water use efficiency, CIÉ Group can reduce our impact on the environment and ensure a more sustainable future for our company and the communities we serve.

CASE STUDY

Case Study: Water Audits

The CIÉ Group Operating Companies have introduced a series of water use audits to ensure that all water use data is accurate and easily available. Once trends are established, options for reduction usage can be determined and targets set for each Operating Company.

In 2022, Iarnród Éireann commenced a review of water management, identifying meters and mapping water usage. The audit provided data on sites with high annual variance, identifying sites for leak investigation and enabling remedial action and a preventative maintenance programme.

Bus Éireann completed extensive leak detection water audits at six key depots in 2022 and installed smart meters monitor real-time water usage. These water audits will allow Bus Éireann to establish an inventory of locations with water usage leaks and defects and establish a preventative maintenance programme based on the audit findings.

Bus Átha Cliath also commenced the installation of smart water meters in locations that rely on well water usage to ensure water use is accurately captured. Real-time monitoring allows for immediate detection of any abnormal water usage, allowing prompt action to be taken to rectify leaks or address inefficiencies.

CASE STUDY

Case Study: Rainwater Harvesting

Bus Átha Cliath is working to introduce circular principles into their operations by assessing their resource use and identifying sustainable alternatives or resource-saving technology. Every year, Bus Átha Cliath uses approximately 6.1 million litres of water in the Summerhill depot to wash their buses.

In 2022, a rainwater harvesting system was installed in Summerhill bus depot to reduce use from water mains and reduce pressure on Dublin's water supply. Rainwater is captured from the roof, filtered into tanks, treated, and then pumped into the bus wash system. The rainwater harvesting system is expected to save an estimated 3 million litres of water annually. Following analysis of the results of the rainwater harvesting system's initial operations, this technology will be installed in additional bus depot locations.

SECTION 12

Action Area: Climate Resilience

SDG	SDG TARGET
13 CLIMATE ACTION	**13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

The physical impacts of climate change – changing rainfall patterns, increased intensity of extreme weather events, sea level rise, and a warming global temperate – are already being felt in Ireland. In accordance with our long term scenario planning programme, CIÉ Group is ensuring that our infrastructure and critical assets can withstand and recover from the impacts of climate change.

CASE STUDY

Case Study: Coastal Infrastructure Project

The coastal routes of the Iarnród Éireann network, due to their close proximity to the sea, will need to be safeguarded from the adverse effects of coastal erosion.

Iarnród Éireann has identified that the section of track following the coast between Dublin and Wexford requires priority attention. In 2021, the East Coast Railway Infrastructure Protection Project (ECRIPP) was established with the aim of protecting the railway at these locations. This project is a major undertaking tasked with mitigating the significant coastal erosion that has been accelerating in recent years due to climate change and storm impacts. The formal establishment of ECRIPP and its funding stream have been advanced for what will be a significant multi-annual investment and an extensive programme of works planned over the next ten years.

The area around Rosslare Harbour is also vulnerable to coastal erosion and requires protection measures to be implemented. In the past several years, Iarnród Éireann has conducted urgent protection works in Rosslare and placed rock armour to offset major land loss in the area. As a result of Iarnród Éireann's proactive efforts, the protective measures in Rosslare have preserved the stability of the area.

SECTION 13

Action Area: Community Engagement and Heritage

13

SDG	SDG TARGET
11 SUSTAINABLE CITIES AND COMMUNITIES	**11.a** Support positive economic, social and environmental links between urban, peri-urban and rural areas.
	11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage.

Through CIÉ Group's work with community organisations and charities, we create strong partnerships that enable local investment and community development. By engaging with local organisations, CIÉ Group is able to provide meaningful support for community-building initiatives that address issues such as poverty reduction, food security, and environmental stewardship.

CIÉ Group is also leading several projects to preserve our cultural heritage. As a historic provider of bus and rail transport in Ireland, CIÉ Group is well placed to promote access to buildings and document archives of historical importance.

CASE STUDY

Case Study: Greenways

CIÉ Group and Iarnród Éireann continue to support the development of new Greenway trails on closed and abandoned railway lines. CIÉ Group has been involved in the development of Greenways from Waterford to Dungarvan; in North Kerry and from Mullingar to Athlone. We also plan to facilitate Greenway developments from Waterford to New Ross; Midleton to Youghal and Navan to Kingscourt, as well as supporting any developments in the future.

The provision of disused rail track and CIÉ Group property underpins our commitment to using our assets and scale to invest in sustainable tourism and country-wide natural capital.

CASE STUDY

Case Study: 'Actually I Can' Community Art Installation

Iarnród Éireann partnered with youth service Sphere 17, Trinity Youth Services, and public art consultancy Fresco and their network of artists to design and create a series of public artworks at DART stations in North Dublin throughout 2022.

Local young people between the ages of 10-18 worked on the art projects from first discussions, concept ideas and planning, to creation and site works. The walls in the Howth, Kilbarrack, and Donaghmede DART stations were painted in creative and abstract ways according to the main themes identified by the participating young people.

CASE STUDY

Case Study: Dublin Pride Partnership

To celebrate Dublin Pride 2022, Iarnród Éireann and the NTA wrapped two DART carriages in the iconic LGBTQ+ rainbow colours. These carriages travelled through Dublin and Wicklow's DART lines for several months, acting as a visual show of support for Dublin Pride.

Bus Átha Cliath has supported the Dublin Pride festival since 2008 at the request of their LGBTQ+ employees. Following the success of their 2021 Pride partnership with Gay Community News, they partnered with LGBT Ireland for Pride 2022 to devise a campaign to showcase and promote LGBT Ireland's services and in doing so, reaffirm Bus Átha Cliath' diversity and inclusion credentials and long-term support of Dublin Pride.

CASE STUDY

Case Study: Focus Ireland #HomeForChristmas Partnership

Iarnród Éireann joined with Focus Ireland for the 6th successive year to launch a campaign to raise vital funds to help in the successful provision of frontline services and housing for people experiencing homelessness.
In December 2022, Iarnród Éireann supported the charity in a number of ways including providing an online option for people to donate €4 to Focus Ireland with the purchase of a rail ticket. They donated advertising space for Focus Ireland along with welcoming Christmas choirs to fundraise for the charity at a number of stations nationwide.

Iarnród Éireann also sponsored several concerts taking place in Christchurch Cathedral in December 2022 featuring the Dublin Ukulele Collective, Mundy, Balbriggan and Fingal Gospel choirs and many others.

CASE STUDY

Case Study: Fill-a-Bus Campaign

Bus Éireann regularly partners with local community organisations to host 'Fill-A-Bus' campaigns across the country, with the aim of filling a bus with donations of non-perishable goods from members of the public. All goods donated are distributed locally to individuals and families in need by their charitable organisation partner.

CASE STUDY

Case Study: Community Spirit Awards

Since 2004, Bus Átha Cliath has been supporting grassroots voluntary and community groups across the GDA through the Community Spirit Awards. To date, 2,165 groups have received funding from Bus Átha Cliath which has helped many worthwhile causes in communities across the GDA.

Dublin Bus Community Spirit Initiative

In 2022, Bus Átha Cliath announced the 65 winners of the Community Spirit Awards, which were awarded grants of €5,000, €2,000 or €1,000 to support their community projects.

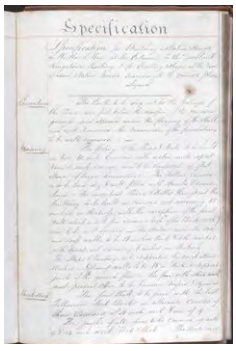
CASE STUDY

Case Study: Archive Scanner Project

The Heuston Station archive comprises of over 50,000 physical documents. Some documents are stored for legal compliance purposes while others are stored for their historical value.

To preserve these historical documents, a specialised Book Scanner was procured in 2022. The Book Scanner will help increase the efficiency of the scanning archiving process, and in the future the scanned heritage documents will be published to a platform that will allow public access.

The CIÉ historic Annual Reports, dating back to 1884, were also scanned, digitised, and uploaded to the CIÉ website at the end of 2022. This project was carried out with the cooperation and assistance of the Irish Railway Record Society.



SECTION 14

Action Area: Decent Work and Wellbeing

SDG	SDG TARGET	
	**3.d**	Strengthen the capacity of all countries for early warning, risk reduction and management of national and global health risks.
	**8.8**	Protect labour rights and promote safe and secure working environments for all workers.

14.1 Decent Work

CIÉ Group provides a safe, high quality working environment for all employees, facilitate the development of skills and competences, reduce unemployment, and promote individual and social wellbeing, by implementing policies that protect labour rights and human rights in the workplace,

Bus Átha Cliath, Bus Éireann, and Iarnród Éireann each have a Dignity and Respect Policy in place to ensure a fair and inclusive workplace where people are valued and treated with respect. The policy covers all employees and deals with complaints of bullying, harassment and sexual harassment.

Employees of Bus Átha Cliath, Bus Éireann, and Iarnród Éireann maintain the right to collective bargaining through membership of the National Bus and Rail Union which allows employers and workers discuss and negotiate the terms and conditions of their work.

CIÉ Group has pledged to avoid bribery, extortion and other forms of corruption, and has developed policies and programmes to address corruption internally and within our supply chain.

UN Global Compact Principle	Policy
Human Rights	✓ Working conditions and employment contracts in line with the Irish Human Rights and Equality Commission Act 2014
Labour Rights	✓ Health and Safety Policy or Safety Statement ✓ COVID-19 Response Plan ✓ Protected Disclosures Policy and Procedure ✓ Dignity and Respect Policy ✓ Diversity and Inclusion Policy ✓ Working conditions and employment contracts in line with the Criminal Law (Human Trafficking) (Amendment) Act 2013, 2000 ✓ Protection of Young Persons (Employment) Act 1996, and other legislation preventing forced labour, child labour, and hazardous working conditions
Anti-Corruption	✓ Anti-Corruption and Anti-Bribery Policy ✓ Employee Code of Conduct

14.2 Wellbeing

CIÉ Group strives to provide a safe, healthy, and positive place to work for all employees, ensuring the protection and promotion of human and labour rights. Each of the CIÉ Group Operating Companies has a Health and Safety policy in place to protect the wellbeing of our employees and passengers. The Iarnród Éireann Medical Department is also leading the development of a cross company employee wellbeing strategy that aims to be in place by 2025. The strategy will be designed and implemented following the results of a Group-wide employee wellness audit, ultimately culminating in a CIÉ Group workplace health and wellbeing strategy and a health and wellbeing programme for each Operating Company.

CASE STUDY

Case Study: Ignition Programme

In 2020, The CIÉ Health Promotion Officer and Chief Medical Officer partnered with the Diabetes Department and Trinity College Dublin to carry out a study on train drivers and their risk of Type 2 Diabetes. Based on the results of the study, the Iarnród Éireann health and wellbeing team developed a proposal for a wellbeing pilot initiative aimed at promoting a healthy lifestyle and addressing chronic preventable health conditions to be carried out in 2022.

Participants across Iarnród Éireann were provided access to the 'Ignition Go' app, an online platform providing health coaching sessions, facilitated online group educational support, and access to additional health and educational resources. The app is aimed at helping participants increase their energy, feel more informed and confident in health-related matters, and motivated to make necessary lifestyle changes by implementing small habits consistently and building on them throughout the programme. In 2022, there were 430 subscribers to the online 'Ignition Go' app, and 192 people attended live events as part of this initiative. Following the results and feedback from the initial six-month pilot programme in 2022, the health initiative will then be evaluated and offered to additional staff across the CIÉ Group.

CASE STUDY

Case Study: Bus Éireann Mental Health First Aiders

In 2022, Bus Éireann developed a wellbeing programme focusing on four strategic wellbeing: Physical, Mental, Financial and Social wellbeing. A number of initiatives were rolled out that aligned to these pillars and goals; namely the development of a Mental Health First Aiders network with 30 staff completing training. This is a first for the transport sector in Ireland and places Bus Éireann as the industry leader in the area. To further enhance social connectedness across the company, 12 wellbeing champions were trained and will promote local and companywide initiatives on an ongoing basis.

CASE STUDY

Case Study: Iarnród Éireann Caring Employers Programme

Iarnród Éireann partnered with Family Carers Ireland in 2022 as a way to provide supports and resources for employees that have caring responsibilities at home. As a member of the 'Caring Employers' programme, Iarnród Éireann will work with Family Carers Ireland to create a programme of activities and policies to ensure that Iarnród Éireann staff are recognised, supported, and accommodated in their professional careers as they balance their caring responsibilities at home.

SECTION 15

Action Area: Diversity and Equal Opportunity

15

SDG	SDG TARGET
5 GENDER EQUALITY	**5.1** End all forms of discrimination against all women and girls everywhere.
	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.
8 DECENT WORK AND ECONOMIC GROWTH	**8.5** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Our Diversity Targets and Objectives

Continue to strive towards a gender balance in our workforce and provide opportunities for further education and training to enhance diversity across CIÉ Group.

CIÉ Holding Company will provide unconscious bias training to staff commencing in 2023.

Bus Éireann targets achieving equal representation on their Board of Directors by 2030 and an increase in the proportion of female service supervisors from 2% in 2019 to 10% in 2030.

Iarnród Éireann targets a 100% increase in the number of female employees by 2030.

Inclusivity ensures that every person at CIÉ Group is empowered to participate, contribute new ideas, and receive equal opportunities. CIÉ Group is committed to providing all employees with equal opportunity for recruitment, career development, and promotion, working towards an equitable community and workplace.

15.1 Diversity and Inclusion in the Workplace

Bus Átha Cliath, Bus Éireann, and Iarnród Éireann each have a Diversity and Inclusion Policy in place, designed to ensure an efficient and fulfilling work environment for their employees, meet the needs of their customers, and deepen the connection to the communities that they serve as public transport providers.

As founding signatories of the Irish Diversity Charter, the CIÉ Operating Companies have developed recruitment and promotion systems based on equality, diversity and non-discrimination as enshrined in their Recruitment and Selection Policies.

	Bus Átha Cliath	Bus Éireann	Iarnród Éireann
Diversity and Inclusion Policy	✓	✓	✓
Recruitment and Selection Policy	✓	✓	✓
Recruitment and Selection Policy	✓	✓	✓
Recruitment and Selection Policy	✓	✓	✓

Iarnród Éireann won the 2022 Chartered Institute of Personneland Development HR Award in the Learning and Development category for their programme to develop female talent in the workplace.

In recognition of their approach to inclusive recruitment, Bus Éireann won the Outstanding Diversity Initiative Award at the 2022 National Diversity and Inclusion Awards. Bus Éireann recruitment actively targets women, socioeconomically challenged groups, and those with accessibility needs.

In 2021, Bus Átha Cliath achieved the Investors in Diversity Bronze Award, demonstrating their commitment to embedding equality, diversity, and inclusion in the organisation's business practices,

CASE STUDY

Case Study: Diversity in Recruitment

Bus Átha Cliath, Bus Éireann and Iarnród Éireann work in partnership with TU Dublin's Access to Apprenticeship Programme which aims to support the transition of young people (16-24 years old) from disadvantaged backgrounds into an apprenticeship scheme.

CASE STUDY

Case Study: Equality and Diversity Champions

Bus Éireann began working in partnership with the Irish Centre for Diversity in 2022 to establish a network of equality and diversity champions that will actively promote a diverse, supportive, and inclusive workplace culture.

CASE STUDY

Case Study: LGBTQ+ Workplace Policy

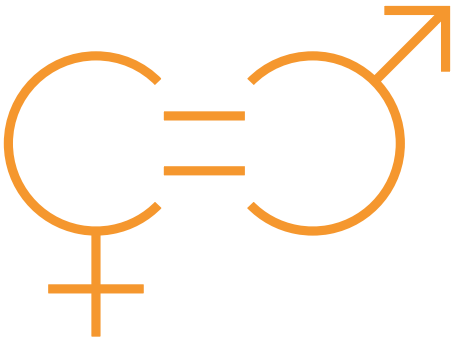
Bus Átha Cliath has developed policies and initiatives with the purpose of supporting their LGBTQ+ employees. In 2017, they launched a Workplace Gender Transition Policy and Guidelines which provide comprehensive information for employees and their managers in Bus Átha Cliath on gender identity and gender transition. The policy is one of the most comprehensive and advanced in the country, as well as being one of the first organisations in Ireland to introduce a policy of this kind. The policy won the 2018 CIPD Ireland HR Award in the Diversity and Inclusion category

15.2 Gender Pay Gap Reports

In 2022, Bus Átha Cliath, Bus Éireann and Iarnród Éireann published their first annual gender pay gap reports. By conducting gender pay gap reports, organisations can identify any disparities in pay or representation between male and female employees and take action to address them.

Although women tend to be greater users of public transport, only 17% of the transport workforce across 46 countries is female. It is essential that we work to address the imbalance in the transport sector workforce, starting with the reporting of any pay gaps across CIÉ Group. Furthermore, the CIÉ Group Operating Companies are actively working to remove barriers to entry for women including addressing gender bias in recruitment and promoting career development opportunities for female employees.

By prioritising gender diversity and publishing annual gender pay gap reports, the CIÉ Group Operating Companies will promote transparency, accountability, and help build a more diverse and inclusive workplace culture.



Operating Company	Gender Pay Gap Report Summary	Initiatives in Place
Bus Átha Cliath	• Mean pay gap: 2.4% in favour of women • Median pay gap: 3.5% in favour of men • Although women are underrepresented in the company, with only 8% of female employees, 37% of women are in higher paying roles which accounts for the low gender pay gap. • Women are particularly underrepresented in bus driving and engineering roles, and Bus Átha Cliath will continue to work to attract women into these areas.	• Since 2016, Bus Átha Cliath has held open days for women with the aim of recruiting more women into bus driving roles. Between August 2019 and December 2022, Bus Átha Cliath increased the number of female drivers by 72%, with over 70% of these new starters having attended an open day. These open days will continue to run in 2023. • To address female underrepresentation within the engineering section at Bus Átha Cliath, they have focused on attracting more women to apply for the apprentice heavy vehicle mechanic programme. In Ireland less than 1% of craft apprentices are women. In Bus Átha Cliath's 2020 and 2022 apprenticeship intakes they took on female apprentice heavy vehicle mechanics, so they now make up 4% of the apprentices.
Bus Éireann	• Mean gender pay gap: 10.2% in favour of women • Median gender pay gap: 5.6% in favour of women • Female employees are underrepresented at Bus Éireann, making up 10% of the workforce • First female Chairperson appointed in 2022 • New target: **Achieve equal representation on the Board of Directors by 2030.** • New target: **Increase in proportion of female service supervisors from 2% in 2019 to 10% by 2030.**	• Ensure that job adverts are gender neutral to attract a broad selection of candidates while all recruitment campaigns are fully representative and inclusive of the diverse Bus Éireann team. • In 2022, Bus Éireann introduced a trainee bus driver programme attracting those with 'B' licences where previously it was a 'D' licence only. Men are more likely to have 'D' licences. • Establishing supervisor relief and promotional panels to encourage more female applicants to supervisory roles. Working on a relief panel allows the employee to develop a realistic view of what the role entails, which might be different to the applicant's perception of the role. Relief panels help ensure a fit between the person and the role and helps retain employees for longer. • Sponsor two women every year to complete DCU's programme for female leadership 'Take the Lead'. • Ran a pilot programme 'Empowering Women in Business' with Positive2Work Skillsnet and also piloted 'career development workshops' with Positive2Work Skillsnet to support internal mobility.
Iarnród Éireann	• Mean pay gap: 6.32% in favour of women • Median pay gap: 12.9% in favour of women • Need for increased representation of women across all roles as a key initiative. • New target: **double the number of female employees to 22% by 2030.**	• The Women in Leadership Programme and the Women in Rail Network combine learning and career development workshops to empower women and create a supportive network of likeminded peers. • The Try a Trade Programme encourages girls and mixed schools to visit Inchicore Works' apprentice workshops and "try a trade," in many cases for the first time. • Iarnród Éireann participates in the World of Work programme with Open Doors and Ptech Ireland. Both organisations focus on developing skills and competencies for young students while giving them insight into the workplace.

SECTION 16

Action Area: Transit Oriented Development

16

SDG	SDG TARGET
11 SUSTAINABLE CITIES AND COMMUNITIES	**11.3** By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.

Transit-Oriented Development (TOD) is an urban design principle that creates compact, walkable, pedestrian-oriented, mixed-use communities centred around high quality public transport systems. CIÉ is committed to integrating TOD whenever feasible by utilising the extensive and centrally located property holdings in the CIÉ Group portfolio. We have the potential to optimise the provision of housing, employment and urban spaces in close proximity to the frequent, high-quality transport services which are necessary to support TOD. CIÉ is working on a ten-year plan for delivery of flagship Masterplan projects across the country.

16.1 Heuston Station, Dublin

The Heuston Station Masterplan will oversee the development of a largely brownfield site into a destination for living, working, exercising, and socialising. The 10-hectare site will offer mixed-use commercial, residential and leisure facilities with potential for over 1,000 new residential units, access to one kilometre of riverfront space, and new pedestrian and active transport infrastructure. The proposed Masterplan will align with planned expansions to public transport infrastructure, including the DART+ and BusConnects projects, delivering accessible and convenient transportation across Dublin. Initial design works are underway for the provision of green infrastructure and facilities including a new pedestrian and cycle river crossing into Heuston and a 2,500 space cycle park facility as well as designs for a substantial new office building constructed according to green building principles.

HEUSTON MASTERPLAN

16.2 Connolly Station, Dublin

CIÉ commenced development of the Dublin Arch project at Connolly Station in 2022. The development will comprise of extensive office space, 187 apartments and a 200+ bedroom hotel.

16.3 Colbert Station, Limerick

A Spatial Framework for lands at Colbert Station Limerick was prepared by the Land Development Agency (LDA) in conjunction with CIÉ Group, Limerick City and County Council and the Health Service Executive. The Spatial Framework will create sustainable transport linkages between communities and the construction of new urban districts which will overtime deliver up 2,800 homes. CIÉ Group are working with LDA to identify sites that might be made available for TOD.

16.4 Ceannt Station, Galway

The Augustine Hill development at Ceannt Station Quarter, Galway will incorporate over 400 residential units, retail, hotel and office space together with quality public realm areas and facilities for cyclists over 3.3 hectares. Planning permission is expected to be sought for offices and apartments on the remainder of the site.

16.5 Horgan's Quay, Cork

At Horgan's Quay, Cork, the mixed-use development comprises substantial office space, the Boutique DEAN Hotel, 325 residential units and retail units. New areas of public realm have been opened with further areas to be completed as construction works progress.

SECTION 17

Action Area: Partnerships and Knowledge Sharing

SDG	SDG TARGET
17 PARTNERSHIPS FOR THE GOALS	**17.7** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

This year, CIÉ Group has continued to strengthen our partnerships with organisations that have common sustainability goals and are pivotal in offering opportunity for impact. We are working closely with our partners on a range of sustainability challenges, pooling resources, expertise, and strategic assets, in order to deliver impact at scale.

CASE STUDY

Case Study: Microsoft Data Project

CIÉ Group recognises the value and necessity of a robust sustainability data management and insights solution. In 2021, CIÉ Group partnered with Microsoft to further develop the Cloud for Sustainability platform and include the capability to provide data visualisations to track sustainability performance, track progress against sustainability targets and provide insights needed to build resilience to climate-related risks. Throughout 2022, representatives from CIÉ's Sustainability and IT Departments worked with Microsoft's product development team to share recommendations for best practice climate reporting and the capabilities required by the Cloud for Sustainability to meet the needs of a large corporate organisation.

Microsoft also invited CIÉ Chief Sustainability Officer to join their Sustainability Community of Practice, where sustainability practitioners meet regularly to share progress and challenges on their company's sustainability journey.

Microsoft

17.1 UCD NexSys Research Programme

To ensure evidence-based research supports the delivery of a zero emission transport network, we are working with the UCD Energy Institute as part of the NexSys (Next Generation Energy System) strategic research partnership aimed at decarbonising the Irish energy sector.

CIÉ engaged with UCD Energy Institute to co-design two targeted projects under the NexSys programme that will investigate energy demand across the entire transport network and the transition to zero and low emissions fleet technology. As an industry partner in NexSys, CIÉ Group will use the findings to inform strategic planning and key investment decisions.

"The transition to a net zero carbon energy system is one of the major challenges facing the world and is a crucial action to mitigate climate change. [The NexSys] project will help us address those challenges in a sustainable, fair manner."

Simon Harris, Minister for Further and Higher Education, Research, Innovation and Science

17.2 Academic Partnerships

CIÉ joined the University College Cork Sustainable Futures Masters programme as an enterprise partner, working with the programme coordinators to help design climate action and sustainability in enterprise solutions and educational programmes for students. As an enterprise partner, CIÉ will feed into the Sustainable Futures programme and shape the next generation of sustainability and climate professionals.

We have worked with the University of Galway, UCC, UCD and Dublin City University on several net-zero transition innovation research programmes."

17.3 OECD Wellbeing Lens Event

Throughout 2022, the OECD held a series of interviews and workshops with key actors involved in environment and sustainability, and the transport, land-use and housing sectors in Ireland. Representatives from CIÉ Group were invited to participate in the project and share about our sustainability strategy and planned actions to support a net zero transport system.

CIÉ Group and other participants were presented key insights and policy recommendations from the OECD analysis and asked to provide feedback, after which the OECD/CCAC report, "Redesigning Ireland's Transport for Net Zero: Towards Systems that Work for People and the Planet" was published. This report was later cited in Ireland's CAP 2023.

17.4 Hydrogen Mobility Ireland

CIÉ Group is a member of Hydrogen Mobility Ireland (HMI), a group of Irish stakeholders looking to develop the use of hydrogen for transport in Ireland to help meet the challenge of decarbonising transport whilst keeping transport practical and affordable. HMI includes industry members from across the transport and energy industries and has been informed by input from a range of policy stakeholders from the Republic of Ireland and Northern Ireland.

CIÉ Group has continued to strengthen our partnerships with organisations that have common sustainability goals and are pivotal in offering opportunity for impact.

SECTION 18

Embedding a Culture of Sustainability

18

At CIÉ Group, we recognise our employees play an instrumental role in our future as a sustainable business. To develop skills and expertise, we are supporting training in sustainability, climate and green procurement.

18.1 Employee skill development

18.1.1 Sustainability Pass

In 2022, CIÉ Group partnered with 20FiftyPartners to offer an online Sustainability Pass training course to all employees on a phased basis. The Sustainability Pass is designed to empower staff of all disciplines and skill levels in understanding how their sustainable actions will play a vital role in the country's collective response to climate change. By offering standardised training across the Group, we can embed the understanding of sustainability across the company and include all staff in the delivery of our sustainability strategy. The Sustainability Pass was initially rolled out to CIÉ Holding Company and CIÉ Tours staff in 2022 and will be rolled out to the Operating Company employees on a phased basis in 2023.

18.1.2 Sustainability Leadership Programme

Along with the foundational Sustainability Pass training, CIÉ Group offered the opportunity for staff across the Group to enrol in sustainability development with a level 7 programme accredited by University of Limerick.

The programme commenced in September 2022 with 83 employees across different departments and disciplines taking part in this programme.

18.2 Executive Training

Sustainability and ESG seminars have been delivered to CIÉ's Board and senior management teams, providing insights on sustainability strategy and ESG and reporting and legislation; including climate risk and opportunities, the EU Taxonomy and Corporate Sustainability Reporting Directive.

18.3 GIY Grow Circle Programme

The CIÉ Sustainability team organised the 'Grow It Yourself' engagement programme for several Holding Company employees, facilitated by the social enterprise Grow It Yourself (GIY) Ireland. Participants received starter kits and educational resources to support them in cultivating their own edible herbs and vegetables. The GIY programme highlighted the importance of people growing their own food and the links between the food sector and climate change.

By providing our employees with the skills and knowledge to understand climate change and sustainability, we can work together to achieve our sustainability goals.

SECTION 19

Our Vision for 2023

19

As we reflect on the progress made in the past year, we are proud of the steps taken towards delivering a sustainable transport network. At the heart of our commitment lies the ambitious goal of decarbonising our fleets and operations, an undertaking that has requires significant investment and strategic planning. Throughout 2022, we worked to ensure best practice in sustainability governance, resource management, the protection of natural capital, and have devoted substantial resources and efforts to prepare our stations and depots for the transition to zero emission vehicles. We now outline our goals and vision for the upcoming year, building upon the solid foundation we have established, as we continue to propel our sustainability journey forward.

One of the key areas of focus for the Group in 2023 will be to coordinate policy on key areas of sustainability including green public procurement, water management and energy management. CIÉ Group will also focus on investing in infrastructure, communications and implementation of improved circularity through measures to tackle single use plastics in contracts, scaling opportunities for rainwater harvesting, supporting initiatives to tackle waste, and improving recycling rates across the Group.

Additionally, CIÉ Group will work with our partners in the SEAI, NTA and DoT to create a glidepath for reaching our 51% reduction in emissions and 50% improvements in energy efficiency by 2030. We are committing to SBTi and will commence the process of preparation for verification of SBTs. We will continue to develop our strategy to decarbonise all journey types across the network. This will include the trialling of HVO, increased biofuel blends and hydrogen in rail and bus fleets on hard to abate journey types. We will continue to play a role in supporting development of the hydrogen economy, working with industry, academia and policy stakeholders.

As part of our ongoing efforts to enhance our environmental performance, CIÉ Group will continue to integrate biodiversity considerations into our decision-making processes, recognising the need to assess and manage our impacts and dependencies on biodiversity. Pollinator plans will be extended across our stations and depots, and we will actively seek avenues to promote biodiversity across our land assets. Additionally, we will assess opportunities to align with the Taskforce on Nature-related Financial Disclosures, which provides guidance on best practices for safeguarding natural capital.

CIÉ Group will also take steps to prepare for the sustainability reporting standards that are being implemented in the EU and Ireland, including the NewEra and CSRD frameworks, the EU Taxonomy regulations and the reporting required under the UN Global Compact, CDP, and TCFD frameworks. Conducing climate scenario analysis and financial assessment of climate risks and opportunities are all considered best practices under the TCFD framework. In 2023, we will establish the necessary structures to conduct this analysis in preparation for the CSRD reporting, and to inform our management response to the climate-related risks and opportunities faced by the CIÉ Group.

In 2023, CIÉ Group will set out a policy for Group wide sustainability data management across each Operating Company's business units and IT functions. Sustainability metrics will be mapped across the organisational units of each Operating Company, and data metrics and reporting processes will be reviewed and verified to ensure consistency across the Group. This work will support in the development of a reporting system to streamline, facilitate and automate a solution for metrics and reporting for sustainability disclosures.

CIÉ Group is looking to build skills and empowerment of employees to address climate action and sustainability to help us achieve our sustainability goals. In 2023, we will strengthen our sustainability community of practice through the sustainability leadership programme, and we will continue to roll out sustainability training to employees across all levels of the company in order to implement a culture change across the Group when it comes to sustainability.

The CIÉ Group's sustainability strategy is dynamic in nature, responding to an evolving policy backdrop and increased urgency to take action. While the breath of our 2020 sustainability strategy is broad and the ambition high; throughout 2023 we will continue to work together as a Group, to ensure our sustainability strategy supports delivery of the national challenges relating to the transition to a greener economy.

List of Abbreviations

ARC	Audit and Risk Committee
BER	Building Energy Rating
BEV	Battery Electric Vehicle
CAP	Climate Action Plan
CCAC	Climate Change Advisory Council
CDP	Carbon Disclosure Project
CEO	Chief Executive Officer
CO2	Carbon dioxide
CO2e	Carbon dioxide equivalent
CSO	Chief Sustainability Officer
CSRD	Corporate Sustainability Reporting Directive
DAA	Dublin Airport Authority
DCU	Dublin City University
DECC	Department of Environment, Climate and Communications
DoT	Department of Transport
ECRIPP	East Coast Railway Infrastructure Protection Project
EPA	Environmental Protection Agency
ESG	Environmental, Social and Governance
EU	European Union
EV	Electric vehicle
FCEV	Fuel cell electric vehicle
GDA	Greater Dublin Area
GHG	Greenhouse gas
HMI	Hydrogen Mobility Ireland
ICR	Intercity rail
IPCC	Intergovernmental Panel on Climate Change
Km	Kilometres
KPI	Key performance indicator
kWh	Kilowatt hour
LDA	Land Development Agency
LED	Light Emitting Diode
M&R	Monitoring and Reporting
M3	Cubic metres
MWh	Megawatt hour
NDP	National Development Plan
NewEra	New Economy and Recovery Authority
NGFS	Network for Greening the Financial System
NPF	National Planning Framework
NTA	National Transport Authority

OECD	Organisation for Economic Co-operation and Development
OPW	Office of Public Works
PV	Photovoltaic
PPA	Power Purchase Agreement
PSO	Public Service Obligation
RCP	Representative Concentration Pathway
RMIS	Risk Management Information System
RVM	Reverse Vending Machine
SAG	Sustainability Advisory Group
SBT	Science Based Targets
SBTi	Science Based Targets Initiative
SDGs	Sustainable Development Goals
SEAI	Sustainable Energy Authority of Ireland
SSG	Sustainability Steering Group
TCFD	Taskforce on Climate-Related Financial Disclosures
tCO2e	Tonnes of carbon dioxide equivalent
TOD	Transit oriented development
UCD	University College Dublin
UN	United Nations

APPENDIX I

Our Sustainability KPIs

Scope 1,2 and 3 emissions are calculated using emissions factors from UK Department for Environment, Food and Rural Affairs (DEFRA) and the Sustainable Energy Authority of Ireland (SEAI). See Appendix IV for conversion factors used.

Iarnród Éireann Key Performance Indicators:

Pillar 1: Economic					
Generating Economic Value					
Connecting People	**2022**	**2021**	**2020**	**2019**	**2018**
Passenger journeys (millions)	35.8	17.4	17.9	50.2	47.9
Passenger journeys (% increase)	106%	-2.80%	-64.20%	5.10%	5.30%

Pillar 2: Social					
Sustainable cities and communities					
Accessibility	**2022**	**2021**	**2020**	**2019**	**2018**
Fully accessible stations	114	114	110	110	110
Community Engagement	**2022**	**2021**	**2020**	**2019**	**2018**
Partner organisations/ beneficiaries directly reached	36	51	33	12	-

Sustainable cities and communities					
Investing in our employees	**2022**	**2021**	**2020**	**2019**	**2018**
Number of Employees	4231	4231	4135	4009	3831
Safety	**2022**	**2021**	**2020**	**2019**	**2018**
Employee lost time accidents – reportable	53	43	35	55	47
Gender equality	**2022**	**2021**	**2020**	**2019**	**2018**
Female employees (%)	11%	11%	11%	11%	10%
Women in senior management roles (%)	17%	17%	19%	20%	18%
Female Board members (%)	57%	57%	57%	57%	50%

Pillar 3: Environment

Climate Action and Air Quality

Greenhouse Gas (GHG) Emissions	2022	2021	2020	2019	2018
Scope 1 – Transport emissions (thousand tCO2e)	124.67	122.22	104.9	126.73	123.26
Scope 2 – Indirect emissions from electricity purchased (thousand tCO2e)	19.1	19.65	17.58	21.09	23.86
Scope 3 -Indirect other (thousand tCO2e)**	32.47	-	-	-	-
Total emissions (thousand tCO2e)	176.24				
Energy Efficiency	**2022**	**2021**	**2020**	**2019**	**2018**
Train diesel consumption B0 (litres)	44,342,630	43,479,272	36,968,720	45,150,850	43,830,400
Train diesel consumption B0 (MWh) (SEAI conversion factor 10.169 L/kWh)	450,920	442,141	375,935	459,139	445,711
Road diesel use (forecourt diesel) litres	1,492,557	1,440,676	1,443,752	1,443,700	1,476,100
Road diesel use (forecourt diesel) (MWh) (SEAI conversion factor 10.169 L/kWh)	15,178	14,650	14,682	14,681	15,010
Electricity for traction (MWh)	23,600	23,453	23,235	27,695	26,222
Electricity for fixed assets (MWh)	32,718	31,805	35,804	35,791	37,031
Electricity total (MWh)	56,318	55,258	59,039	63,486	63,253
Gas usage (MWh)	9,406	9,277	9,979	9,278	9,032
Total Energy Consumption (MWh)	531,822	521,326	459,634	546,584	533,007
Other Fuel and Energy Related Emissions (Diesel and Gas)	**2022**	**2021**	**2020**	**2019**	**2018**
Diesel B0 Well-To-Tank Emissions (thousand tCO2e)	27.73	27.34	23.24	28.39	27.56
Forecourt Diesel Well-to-Tank Emissions (thousand tCO2e)	0.91	0.88	0.88	0.88	0.90
Gas Well-to-Tank Emissions (thousand tCO2e)	0.29	0.27	0.31	0.29	0.28
Electricity Well -to-tank Emissions (thousand tCO2e)	1.40	1.37	1.47	1.58	1.57
Fleet Proportions	**2022**	**2021**	**2020**	**2019**	**2018**
Fleet cars with hybrid engine (%)	15%	6%	4%	0%	0%
Fleet that are fully powered by electricity (%) (DART cars as % of total cars / carriages)	24%	24%	24%	24%	24%

Responsible Consumption and Production

Waste management	2022	2021	2020	2019	2018
Total waste generated (tonnes)	2084	1580	1512	2314	2337
Waste recycled (tonnes)	1091	769	726	1221	1272
Waste recycled/recovered (%)	52%	49%	48%	53%	54%
Hazardous waste (tonnes)	707	853	1132	765	909
Water management	**2022**	**2021**	**2020**	**2019**	**2018**
Water consumption (cubic metres)	365,603	220,461	-	-	-

*Scope 3 emissions include emissions from water, waste, air travel and Well-to-tank emissions from fuel use

Bus Éireann Key Performance Indicators:

Pillar 1: Economic

Generating Economic Value					
Connecting People	**2022**	**2021**	**2020**	**2019**	**2018**
Passenger journeys (millions)	89.5	57.5	51	89	84
Number of buses in operation	1099	1178	1047	1,138	1,148

Pillar 2: Social

Sustainable cities and communities					
Accessibility	**2022**	**2021**	**2020**	**2019**	**2018**
Fully accessible managed stations/stops (%)	100%	100%	90%	75%	65%
Community Engagement	**2022**	**2021**	**2020**	**2019**	**2018**
Partner organisations/beneficiaries directly reached	20	15	22	13	12
No. of students transported under the School Transport Scheme per school day	151,000	122,000	114,000	120,800	117,800
No. of students transported per school day with special education needs	17,500	16,000	14,500	14,300	13,400

Sustainable cities and communities					
Investing in our employees	**2022**	**2021**	**2020**	**2019**	**2018**
Number of Employees	2827	2787	2,711	2,710	2,647
Safety	**2022**	**2021**	**2020**	**2019**	**2018**
Employee accident rate per 100 employees	0.79	0.83	1.03	1.32	1.76
Gender equality	**2022**	**2021**	**2020**	**2019**	**2018**
Female employees (%)	10%	10%	10%	9%	9%
Women in Senior Management roles (%)	39%	34%	33%	30%	32%
Female Board members (%)	29%	33%	17%	25%	25%

Pillar 3: Environment

Climate Action and Air Quality

Greenhouse Gas (GHG) Emissions	2022	2021	2020	2019	2018
Scope 1 -Direct emissions (thousand tCO2e)	72.67	70.34	70.29	83.89	77.33
Scope 2 -Indirect emissions from electricity purchased (thousand tCO2e)	1.36	1.62	1.5	1.79	1.98
Scope 3 -Indirect other (thousand tCO2e)**	17.17	-	-	-	-
Total emissions (thousand tCO2e)	91.20	-	-	-	-
Energy Efficiency	**2022**	**2021**	**2020**	**2019**	**2018**
Diesel use (thousand litres of diesel)	26,885	25,993	25,869	30,992	28,491
Diesel use (MWh) (SEAI conversion factor 10.169 L/kWh)	273,398	264,323	263,059	315,157	289,727
Electricity total (MWh)	4017	4543	5029	5389	5236
Gas usage (MWh)	5084	5683	6041	6100	6189
Kerosene Usage (MWh)	638	-	602	529	519
Total Energy Consumption (MWh)	283,137	274,549	274,731	327,175	301,671
Other Fuel and Energy Related Emissions (Diesel and Gas)	**2022**	**2021**	**2020**	**2019**	**2018**
Diesel B0 Well-To-Tank Emissions (thousand tCO2e)	14.26	13.86	14.11	16.45	14.92
Gas Well-to-Tank Emissions (thousand tCO2e)	0.00	0.00	0.00	0.00	0.00
Diesel average biofuel blend Well-to-Tank Emissions (thousand tCO2e)	2.57	2.41	2.09	2.95	2.91
Gasoil (kerosene) Well-To-Tank Emissions (thousand tCO2e)	0.04	0.00	0.04	0.03	0.03
Electricity Well-To-Tank Emissions (thousand tCO2e)	0.10	0.11	0.12	0.13	0.13
Fleet Proportions	**2022**	**2021**	**2020**	**2019**	**2018**
Service fleet with Euro VI standard engine (%)	80%	63%	55%	53%	43.00%
Service fleet with hybrid engine (%)	8%	9%	0	0	0
Service fleet that are zero tailpipe emissions (fully powered by electricity or hydrogen) (%)	0.4%	0.3%	0	0	0

Responsible Consumption and Production

Waste management	2022	2021	2020	2019	2018
Total waste generated (tonnes)	620	623	681	782	745
Waste recycled (tonnes)	120.9	93.45	47.67	76	45
Waste recycled/recovered (% of waste collected to be recycled)	20%	15%	7	9.7	6
Hazardous waste (tonnes)	583	398	-	-	-
Water management	**2022**	**2021**	**2020**	**2019**	**2018**
Water consumption (cubic metres)	43,768*	48,719	-	-	-

*Leak experienced in Drogheda under investigation, 2022 figure excludes Drogheda.

**Scope 3 emissions include emissions from water, waste, air travel and Well-to-tank emissions from fuel use

Bus Átha Cliath Key Performance Indicators:

Bus Átha Cliath Dublin Bus

Pillar 1: Economic

Generating Economic Value					
Connecting People	**2022**	**2021**	**2020**	**2019**	**2018**
Passenger journeys (million)	121	70	69	142	143
Passenger kilometres (million)	968	559	555	1,147	979
Number of buses in operation	1056	1034	994	1,016	1,010

Pillar 2: Social

Sustainable cities and communities					
Accessibility	**2022**	**2021**	**2020**	**2019**	**2018**
Fully accessible stations/stops (%)	100%	100%	100%	100%	100%
Community Engagement	**2022**	**2021**	**2020**	**2019**	**2018**
Number of Groups awarded 'Community Spirit' funding grants	65	65	-	88	85

Sustainable cities and communities					
Investing in our employees	**2022**	**2021**	**2020**	**2019**	**2018**
Number of Employees	3827	3,680	3,573	3,552	3,432
Gender equality	**2022**	**2021**	**2020**	**2019**	**2018**
Female employees (%)	8%	8%	7%	7%	7%
Women in Senior Management roles (%)	21%	22%	22%	22%	22%
Female Board members (%)	38%	50%	44%	44%	44%

Pillar 3: Environment

Climate Action and Air Quality

Greenhouse Gas (GHG) Emissions	2022	2021	2020	2019	2018
Scope 1 -Direct emissions (thousand tCO2e)	66.58	61.42	62.33	69.39	74.08
Scope 2 -Indirect emissions from electricity purchased (thousand tCO2e)	1.47	1.56	1.32	1.52	1.68
Scope 3 – Indirect other (thousand tCO2e)**	15.71	-	-	-	-
Total emissions (thousand tCO2e)	83.76	-	-	-	-
Energy Efficiency	**2022**	**2021**	**2020**	**2019**	**2018**
Diesel use (thousand litres)	24,116	22,148	22,440	25,029	26,759
Diesel use (MWh) (SEAI conversion factor 10.169 L/kWh)	245,236	225,225	228,187	254,518	272,115
Electricity total (MWh)	4,324	4,401	4,423	4,576	4,463
Gas usage (MWh)	9,036	9,189	10,020	10,785	11,111
Total Energy Consumption (MWh)	258,596	238,814	242,630	269,880	287,689
Total Energy Consumption (MWh)	283,137	274,549	274,731	327,175	301,671
Other Fuel and Energy Related Emissions (Diesel and Gas)	**2022**	**2021**	**2020**	**2019**	**2018**
Diesel B0 Well-To-Tank Emissions (thousand tCO2e)	15.16	13.93	14.11	15.74	16.82
Gas Well-to-Tank Emissions (thousand tCO2e)	0.28	0.29	0.31	0.34	0.35
Electricity Well-to-Tank Emissions (thousand tCO2e)	0.11	0.11	0.11	0.11	0.11
Fleet Proportions	**2022**	**2021**	**2020**	**2019**	**2018**
Fleet with Euro IV standard engine (%)	9%	15%	14%	14%	14%
Fleet with Euro V standard engine (%)	14%	7%	7%	15%	15%
Fleet with Euro VI standard engine (%)	53%	60%	57%	56%	46%
Fleet with hybrid engine (%)	22%	15.00%	0.88%	0.88%	0%
Fleet that are fully powered by electricity (%)	0%	0%	0%	0%	0%
Average age of bus fleet (years)	6.34	6.8	7	7	6

Responsible Consumption and Production

Waste management	2022	2021	2020	2019	2018
Total waste generated (tonnes)	640	733	817	821	912
Waste recycled (tonnes)	478	463	563	627	658
Waste recycled/recovered (% of waste collected to be recycled)	73%	63%	69%	64%	72%
Hazardous Waste	1102	-	-	-	-
Water management	**2022**	**2021**	**2020**	**2019**	**2018**
Water consumption (cubic metres)	85,567	75,185	61,221	56,754	-

APPENDIX II

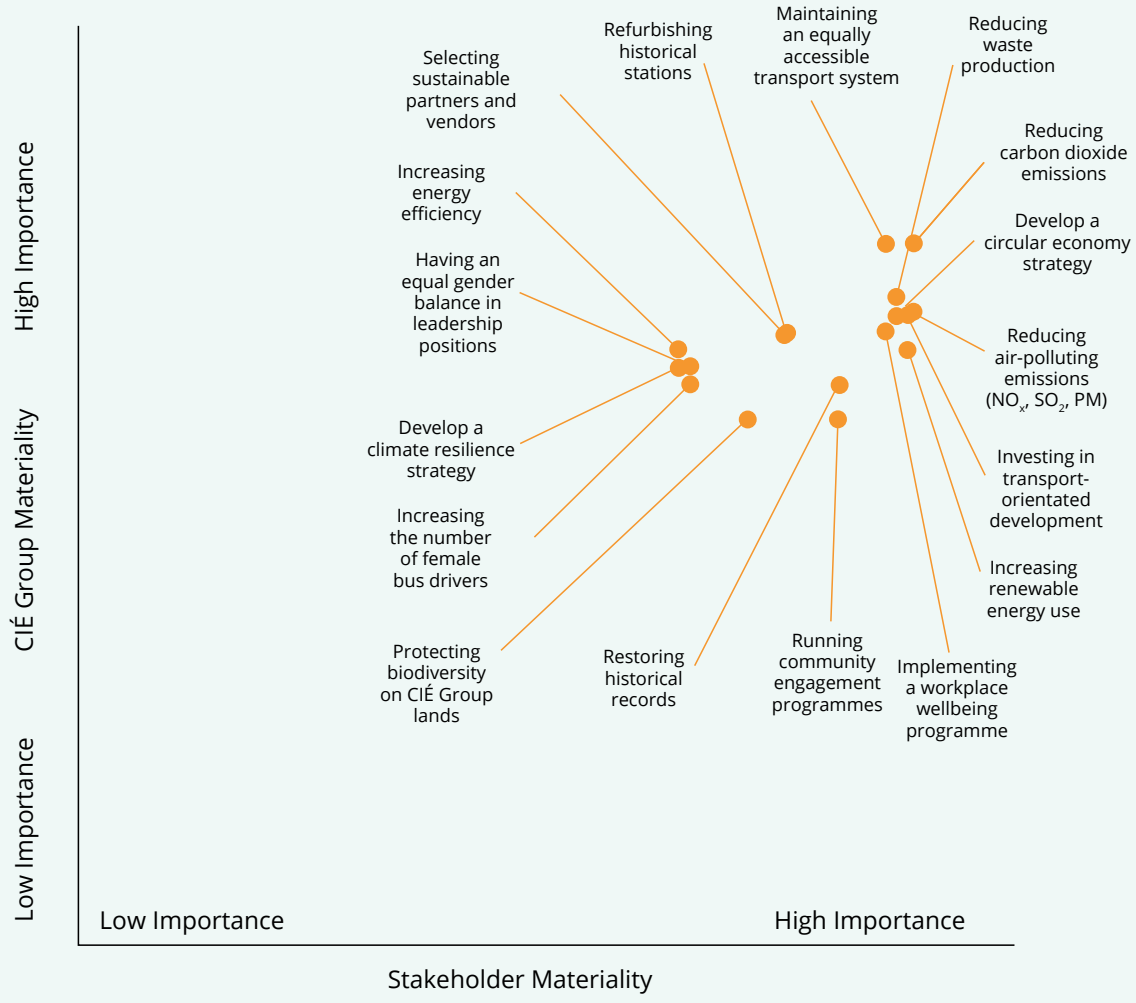
Stakeholder Engagement

CIÉ Group considers stakeholder engagement to be a critical component of sustainable development, allowing us to better understand stakeholder expectations on sustainability and build an internal consensus on key sustainability priorities. The involvement of our stakeholders – employees, passengers, organisations, and Government – helps ensure that CIÉ Group's decision-making reflects the needs, values, and concerns of the communities that we serve.

By creating opportunities for stakeholder input, CIÉ Group facilitates strategic decision-making, informed policies, and greater acceptance and support of sustainability initiatives. CIÉ Group will continue to prioritise stakeholder engagement and invite our stakeholders to share their input on our strategic approach to sustainability.

In 2021, CIÉ Group distributed the first sustainability stakeholder survey to employees across the operating companies to raise awareness about the Group's emphasis on sustainability and collect feedback on the Group's strategy and prioritisation of initiatives. The results of the survey were collated and plotted on the below materiality matrix, which indicates that the highest-priority actions for CIÉ Group and its employees are reducing CO2 and air polluting emissions and delivering transport orientated development. Of the eight actions that received the highest priority rating from employees, five were related to environmental quality.

Employee Materiality Matrix - Materiality Assessment



The following table provides a series of examples of the stakeholder engagement that CIÉ Group carried out in 2022.

Stakeholder Group	Engagement Process	Engagement Subjects
Employees	CIÉ Group regularly engages with our employees through: - Surveys - Town hall meetings - Green teams - Internal company social media channels - Sustainability training and feedback	CIÉ Group values employee engagement as it is vital for the successful delivery of our sustainability strategy. By creating opportunities for feedback and communication, employees at CIÉ Group provide feedback on sustainability initiatives and are encouraged to suggest new initiatives that can be implemented across the Group. In 2022, employee engagement included feedback and dialogue on topics such as health and wellbeing, sustainability training, health and safety, energy efficiency, and sustainability achievements. The sustainability employee training provided Climate Ready Academy also created opportunities for staff across CIÉ Group to provide input on the CIÉ.
Organisations	CIÉ Group regularly engages with other organisations through the following: - Research programmes - Partnerships - Working Group memberships - Industry collaboration	CIÉ Group recognises the importance of forming productive and mutually beneficial partnerships with other organisations working towards sustainability. We regularly engage with academic institutions, industry groups, and other businesses to facilitate knowledge exchange and incorporate industry and academic findings into the delivery of our sustainability strategy. Additional details on our partnerships can be found in the Partnerships section of this report.
Customers	CIÉ Group welcomes feedback and dialogue with our customers through the following platforms: - Customer satisfaction surveys - Social media - Customer service	CIÉ Group is committed to delivering high standards of service for our customers. To ensure that our customers can communicate their needs and experiences, we welcome feedback on accessibility, service availability, presentation, safety and security, timeliness, comfort, and sustainability.

Stakeholder Group	Engagement Process	Engagement Subjects
Government	Policy meetings, discussions, and public consultations with the following agencies: - DoT - NTA - DECC - NewERA - SEAI	CIÉ Group engages with government departments and various external agencies on policies and initiatives that help us meet our climate targets and strategy, while supporting national policy development regarding climate change. Policies and subjects discussed include: - Biofuel Obligation Scheme - EU Alternative Fuels Infrastructure Regulation - Ireland's National Hydrogen Strategy - Sustainable Mobility Policy - Climate Action Framework for Semi-State Companies
Suppliers	- Tendering process and sustainability criteria - Sustainability performance questionnaire - Market engagement webinars	CIÉ Group regularly engages with our suppliers to communicate our expectations for the sustainability performance of our purchased products and services and to better understand the ability of the market to deliver high sustainability performance.

APPENDIX III

CIÉ Policies and UN Global Compact Alignment

Key policy	In place	UN Global Compact Alignment
An Integrated ESG Policy	✓	Environment, Labour Rights
Environmental Policy	✓	Environment
Health and Safety Policy	✓	Labour Rights
Modern day slavery, forced labour, and child labour*	✗	Human Rights, Labour Rights
Diversity and Inclusion	✓	Human Rights, Labour Rights
Code of Business Ethics	✓	Labour Rights, Anti-Corruption
Anti-Bribery and Corruption	✓	Anti-Corruption
Whistleblowing	✓	Anti-Corruption
Information Security/Data Privacy	✓	Human Rights
Risk Management Measures	✓	Labour Rights
Sustainable Procurement Policy	✓	Environment
Customer Satisfaction	✓	Labour Rights

*CIÉ Group does not have an explicit policy outlawing modern day slavery, forced labour and child labour, however, all of our workplace policies and hiring practices follow Irish legislation which explicitly outlaws modern day slavery, forced labour and child labour.

APPENDIX IV

Taskforce for Climate Related Financial Disclosures

		Recommended Disclosures	CIÉ Group Disclosure
Governance	Disclose the organisation's governance around climate-related risks and opportunities.	Describe the board's oversight of climate-related risks and opportunities.	• The CIÉ Board has responsibility for the Group strategy and sustainability performance. • The CIÉ Group CEO has overall responsibility for climate-related issues. • In 2020, the Group CEO created the SAG, a sub-committee of the CIÉ Group Board which reports quarterly to the CIÉ Board on progress of sustainability initiatives. • The SAG has oversight of delivery of the Group sustainability strategy and climate action performance. • The CIÉ Board Audit and Risk Committee (ARC) regularly reviews the principal risks of CIÉ Group and makes recommendations to the Board of CIÉ on their treatment. A review of the risks presented by the ARC is a standing agenda item at all CIÉ Board meetings. • CIÉ Group will continue to strengthen Board oversight of climate-related risks as needed to support the embedding of our sustainability strategy. Additional detail on CIÉ Group climate governance can be found in the Governance section.
		Describe management's role in assessing and managing climate-related risks and opportunities.	• The risk team from each Operating Company and Holding Company meet regularly to review climate related risks. Risk ratings and actions are then reported to the Executive Team, Audit and Risk Committee and the Board so that it can be monitored and reviewed on a periodic basis. • The Sustainability Steering Group is comprised of members from CIÉ Holding Company and each Operating Company who have oversight of sustainability and climate-related risks and opportunities within their respective companies and work across Group to develop and deliver the Group sustainability strategy. Additional detail on CIÉ Group climate governance can be found in the Governance section.

		Recommended Disclosures	CIÉ Group Disclosure
Strategy	Disclose the Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	• CIÉ Group released its first sustainability strategy in 2020 which is founded on the principles of the SDGs and spans across the three dimensions of sustainable development: economic, social and environmental. The CIÉ Group Three Pillars of Sustainability ensures an integrated approach toward sustainability and assists us in mitigating our climate risks and taking advantage of our opportunities.
		Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	• Climate/ESG Risks are sub-categorised as Physical Risks related to the physical impacts of climate change– Chronic and Acute, and Transition risks to a low carbon business model – Policy and Legal/Regulatory, Technology, Market, Reputational. CIÉ Group focus on risks with a material strategic and financial impact on the business, including climate-related/ESG risks. • In 2022, the CIÉ Board approved the creation of the sustainability fund to finance the delivery of our strategy. This is a five year rolling fund to assist us meeting the targets and goals as set out in our CIÉ Group sustainability strategy. The governance of projects under the sustainability fund is aligned to the Public Spending Code.
		Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	• In 2022, the focus of CIÉ Group was to further develop our climate risk management framework and prepare to carry out climate scenario analysis across the Operating Companies to help identify, define, and quantify our climate-related risks and opportunities and stress test out strategy. • Our work in this area began with the identification and definition of two climate scenarios, a transitional climate scenario consistent with limiting global warming to 1.5°C, and a scenario demonstrating with increased physical climate risks consistent with 4°C of global warming. These scenarios were constructed using inputs from the International Energy Agency Global Climate and Energy Model, EPA, climate projections, the NGFS Scenarios and the IPCC GHG concentration pathways. • Using our climate scenarios as a starting point, CIÉ will explore the possible business impacts under these different assumptions. CIÉ Group will continue to develop our scenario analysis and risk identification process in 2023, commencing with the formation of a cross-company Working Group that will identify most material risks and opportunities to CIÉ, before undertaking a comprehensive assessment across our entire operations and value chain. Additional detail on CIÉ Group climate scenarios can be found in the Scenario Analysis section.

		Recommended Disclosures	CIÉ Group Disclosure
Risk Manage-ment	Disclose how the organisation identifies, assesses, and manages climate-related risks.	Describe the organisation's processes for identifying and assessing climate-related risks.	• Where a climate risk or opportunity is identified, the Risk Owner will assess the impact of the risk and frequency with which it should be assessed using the CIÉ Risk Management Framework. If the risk is identified and determined to not be at an acceptable level and is above the risk appetite, it will be updated with mitigating actions to reduce the residual or planned risk. Additional detail on CIÉ Group climate risk management can be found in the Risk Management section.
		Describe the organisation's processes for managing climate-related risks	• CIÉ Group uses a Risk Management Information System (RMIS) to record and monitor risks that are considered to have a strategic impact on the business. • Each CIÉ Operating Company has identified several climate-related risks and is managing them through their RMIS. As we further establish our scenario analysis process, additional risks are expected to emerge and be included in the RMIS along with any mitigating actions to help reduce the risk. • CIÉ Group aims to complete further analysis to financially quantify each risk once the updated climate risk register has been approved. Additional detail on CIÉ Group climate risk management can be found in the Risk Management section.
		Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	• The processes for identifying, assessing and managing climate related/ESG risks are fully integrated into CIÉ Group's overall risk management system as outlined in the company's Risk Management Framework • CIÉ Group uses a Risk Management Information System (RMIS) to record and monitor risks that are considered to have a strategic impact on the business. • Climate related risks come under the same governance structure as all other risks and are reported to the Board via the ARC. Additional detail on CIÉ Group climate risk management can be found in the Risk Management section.

		Recommended Disclosures	CIÉ Group Disclosure
Metrics and Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	• CIÉ Group Operating Companies measure a range of KPIs to track progress towards our sustainability targets and ambitions. These KPIs are divided into economic, social and environmental segments, reflecting the three-pillar sustainability strategy. • Select KPIs for each Operating Company are reported in the Sustainability KPIs section.
		Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	• The TCFD recommendations highlight the importance for organisations to disclose their Scope 1, Scope 2, and Scope 3 emissions. • Scope 1,2, and 3 emissions for each Operating Company are reported in the Sustainability KPIs section.
		Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	CIÉ Group's targets are in line with the targets as set out by Government in the 2023 Climate Action Plan. These targets include: • Decrease our GHG emissions by 51% by 2030 (2018 baseline year) • Transition our diesel bus fleet to zero emissions vehicles • Deliver an expanded and electrified DART network through the DART+ Programme • Increase energy efficiency by 50% by 2030 (2018 baseline year) • Deliver water savings initiatives across our operations in areas of high-water use • Increase the recycling rate across CIÉ Group • Include sustainability criteria in 100% of tenders by 2030 • Plant 40 hectares of native trees on non-operational lands by 2030 • Demonstrate alignment with the EU Taxonomy Framework by 2024 • Continue to strive towards a gender balance in our workforce Additional detail on CIÉ Group targets can be found in the Targets and Objectives section.

APPENDIX V

CIÉ Group Alignment and Contribution to the SDGs

CIÉ and the Sustainable Development Goals			
Sustainable Development Goal		**SDG Sub-target**	**The Role of CIÉ Group**
	**SDG 3: Ensure healthy lives and promote well-being for all at all ages**	3.d Strengthen the capacity of all countries for early warning, risk reduction and management of national and global health risks	• Implementing wellbeing and health and safety policies in the workplace to promote the health and wellness of our employees.
	**SDG 5: Achieve gender equality and empower all women and girls**	5.1 End all forms of discrimination against all women and girls everywhere 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	• Instituting recruitment and training policies aimed at increasing the proportion of women working in the traditionally male-oriented transport industry. • Carrying out Gender Pay Gap analyses for each Operating Company with the aim of narrowing and eliminating any gap
	**SDG 6: Ensure availability and sustainable management of water and sanitation for all**	6.4 By 2030, substantially increase water-use efficiency across all sectors	• Developing a water stewardship programme and investing in water-saving technologies
	**SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all**	**7.2 By 2030, increase substantially the share of renewable energy in the global energy mix** **7.3 By 2030, double the global rate of improvement in energy efficiency** **7.a By 2030, facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology**	• **Reviewing opportunities to increase our use of renewable electricity.** • **Investing in the electrification of our bus and rail fleet to shift away from the use of fossil fuels.** • **Trialling the use of low-carbon fuels, including biofuels and hydrogen, as a complementary technology to electrification** • **Introducing energy-saving technologies and initiatives to help increase energy efficiency.**
	**SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value 8.8 Protect labour rights and promote safe and secure working environments for all workers	• CIÉ Group joined the UN Global Compact to ensure best practice in protecting human and labour rights in the workplace • Implementing policies that promote a diverse, safe, and secure working environment for CIÉ Group employees.
	**SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies	• Renovating our bus and rail stations and depot to allow for charging infrastructure and electric vehicles. • Conducting a feasibility study for the retrofit of CIÉ's office buildings.

CIÉ and the Sustainable Development Goals		
Sustainable Development Goal	**SDG Sub-target**	**The Role of CIÉ Group**
 **SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable**	**11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons** **11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas** **11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage** **11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management**	• **Working with the NTA to deliver the Connecting Ireland Rural Mobility Programme, increasing access to public transport in rural Ireland.** • **Developing projects to preserve and allow access to CIÉ Group's heritage and historic assets.** • **Overseeing the transformation of our fleet to zero-tailpipe emissions technology, reducing the emission of air pollutants to our local environment**
 **SDG 12: Ensure sustainable consumption and production patterns**	**12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse** **12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities**	• **Implementing circular initiatives to reduce waste generation and increase recycling rates across the Group** • **Adopted Responsible Purchasing Policies and working to include sustainability criteria in tenders and contracts across the Group** • **Conducting training for Procurement staff on green procurement principles**
 **SDG 13: Take urgent action to combat climate change and its impacts**	**13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries** **13.2 Integrate climate change measures into national policies, strategies, and planning**	• **Including climate-related risks in the CIÉ risk management framework** • **Carrying out climate scenario analysis to identify and manage our climate-related risks and opportunities** • **Mitigating against the physical impacts of climate change on our assets and infrastructure.**
 **SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems**	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning and development processes	• Implementing biodiversity projects across CIÉ Group, protecting native species and ecosystems. • Following the Iarnród Éireann Biodiversity Guidelines to protect local ecosystems during Iarnród Éireann infrastructure projects.

APPENDIX VI

Conversion Factors

Emissions Category	CO2e Emissions Source	Conversion Factor	Source
Scope 1	Natural Gas	0.000204741 tonnes CO2/kWh	SEAI conversion factor 'Natural Gas'
	Kerosene	0.000257004 tonnes CO2/kWh	SEAI conversion factor 'Kerosene'
	BioLPG	0 tCO2/kWh	SEAI conversion factor 'BioLPG'
	Diesel (fossil)	0.00263868 tonnes CO2/kWh	SEAI conversion factor 'Diesel (fossil)'
	Diesel (blend)	0.00248028 tonnes CO2/kwh	SEAI conversion factor 'Diesel (blend)'
	R410A gas	2.088 tonnes CO2/kg	DEFRA conversion factor 'R410A'
	HFC32 gas	0.675 tonnes CO2/kg	DEFRA conversion factor 'HFC32'
	Kerosene	0.000257004 tonnes CO2/kWh	SEAI conversion factor 'Kerosene'
Scope 2	Grid electricity - Ireland 2022	0.0003392 tonnes CO2/kWh	SEAI conversion factor 'Grid electricity - Ireland 2022'
	Grid electricity - Ireland 2021	0.0003556 tonnes CO2/kWh	SEAI conversion factor 'Grid electricity - Ireland 2021'
	Grid electricity - Ireland 2020	0.0002977 tonnes CO2/kWh	SEAI conversion factor 'Grid electricity - Ireland 2020'
	Grid electricity - Ireland 2019	0.0003322 tonnes CO2/kWh	SEAI conversion factor 'Grid electricity - Ireland 2019'
	Grid electricity - Ireland 2018	0.0003773 tonnes CO2/kWh	SEAI conversion factor 'Grid electricity - Ireland 2018'
Scope 3	Air Travel	0.00266 tonnes CO2/km	Department of Public Expenditure and Reform
	Recyclable waste	0.021280 tonnes CO2/tonne	DEFRA Conversion factor 2022 'plastic/metal/electrical recycling'
	Compostable waste	0.0089105813 tonnes CO2/tonne	DEFRA Conversion factor 2022 'mixed food/garden waste compost'
	Waste - energy recovery	0.0212801 tonnes CO2/tonne	DEFRA Conversion factor 2022 'refuse combustion'
	Cardboard waste recycling	0.0212801 tonnes CO2/tonne	DEFRA Conversion factor 2022 'paper/cardboard recycling/combustion'
	Glass waste recycling	0.0212801 tonnes CO2/tonne	DEFRA Conversion factor 2022 'glass recycling/combustion'
	HFC32 gas	0.675 tonnes CO2/kg	DEFRA conversion factor 'HFC32'
	Kerosene	0.000257004 tonnes CO2/kWh	SEAI conversion factor 'Kerosene'
	Metal waste recycling	0.00098470835 tonnes CO2/tonne	DEFRA Conversion factor 2022 'construction metal - recycling'
	WEEE waste recycling	0.0212801 tonnes CO2/tonne	DEFRA Conversion factor 2022 'plastic/metal/electrical recycling'
	Hazardous waste	0.824 tonnes CO2/tonne	EpE conversion factor for hazardous waste

Emissions Category	CO2e Emissions Source	Conversion Factor	Source
Scope 3 contd.	Water in (water supply)	0.000149 tonnes CO2/m3	DEFRA Conversion factor 2022 'water supply'
	Water out (water treatment)	0.000272 tonnes CO2/m3	DEFRA Conversion factor 2022 'water treatment'
	Diesel (fossil) well-to-tank emissions	0.00062874 tonnes CO2/L	DEFRA Conversion factor 2022 '100% mineral diesel oil well-to-tank'
	Diesel (blend) well-to-tank emissions	0.00060986 tonnes CO2/L	DEFRA Conversion factor 2022 'diesel average biofuel blend'
	Kerosene well-to-tank emissions	0.00005888 tonnes CO2/L	DEFRA Conversion Factor WTT Emissions Gasoil
	Natural gas well-to-tank emissions	0.0000311 tonnes CO2/kWh	DEFRA Conversion factor 2022 'natural gas gross CV'
	Electricity well-to-tank emissions	0.0000248333 tonnes CO2/kWh	European Commission 'Emission intensity of electricity in the European Union 2020'

Sustainability
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