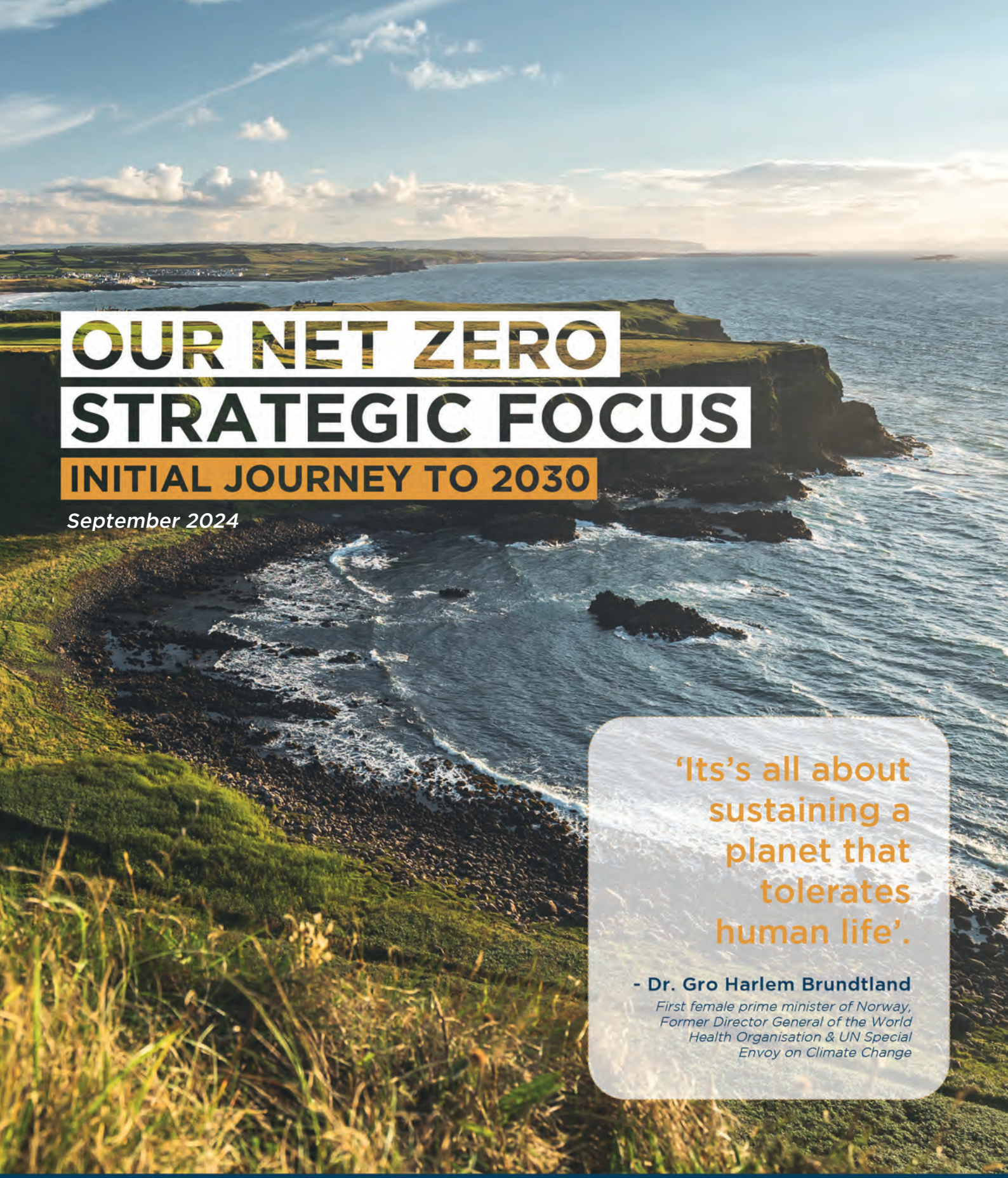


OUR NET ZERO STRATEGIC FOCUS

INITIAL JOURNEY TO 2030

September 2024

'Its's all about sustaining a planet that tolerates human life'.

- Dr. Gro Harlem Brundtland

First female prime minister of Norway, Former Director General of the World Health Organisation & UN Special Envoy on Climate Change

eps

Rethinking Water

INTRODUCTION

EPS Group is a wet infrastructure specialist operating across the Republic of Ireland and the UK and employing over 650 people. We are one of the few genuine end-to-end service providers in the global water sector.

Founded upon 56 years of experience, EPS has grown from a modest electrical and pumping services business into an innovative, internationally exporting product and service provider, now focused upon the water, wastewater and clean technology sectors.

EPS is one of Europe's largest, privately owned Design-Build-Operate (DBO) partners for the delivery and operation of water and wastewater assets. Our current long-term operational concessions cover over 300 treatment assets serving a population equivalent close to 1.1. million.

We are conscious of the impact our activities have on our environment, and in particular, we are conscious of our responsibility to reduce our carbon footprint and to move towards Net Zero as an organisation.

We have been focused on our carbon impact since 2010. As a diverse organisation, this impact includes our offices, warehouses, workshops and the constructions sites we manage, as well as our people who are mobile providing reactive and planned maintenance for customers across the UK and Ireland.

We are focused on our responsibility towards developing a circular business model and play our part in the circular economy transition. Our carbon reduction journey plays an essential component in this agenda.

When we recorded our initial baseline in 2011, awareness of our impact and requirements was not as clear. Our initial commitments set out our targets which were ambitious at that time, and were in response to the Climate Action Bill 2010 in Ireland.

At that time, we set ourselves short, medium and long term targets which continue to guide us now. Our commitment at that time was to; reduce our carbon by 2.5% per year for 5 years, reach 40% reduction by 2030 and achieve 80% reduction by 2050.

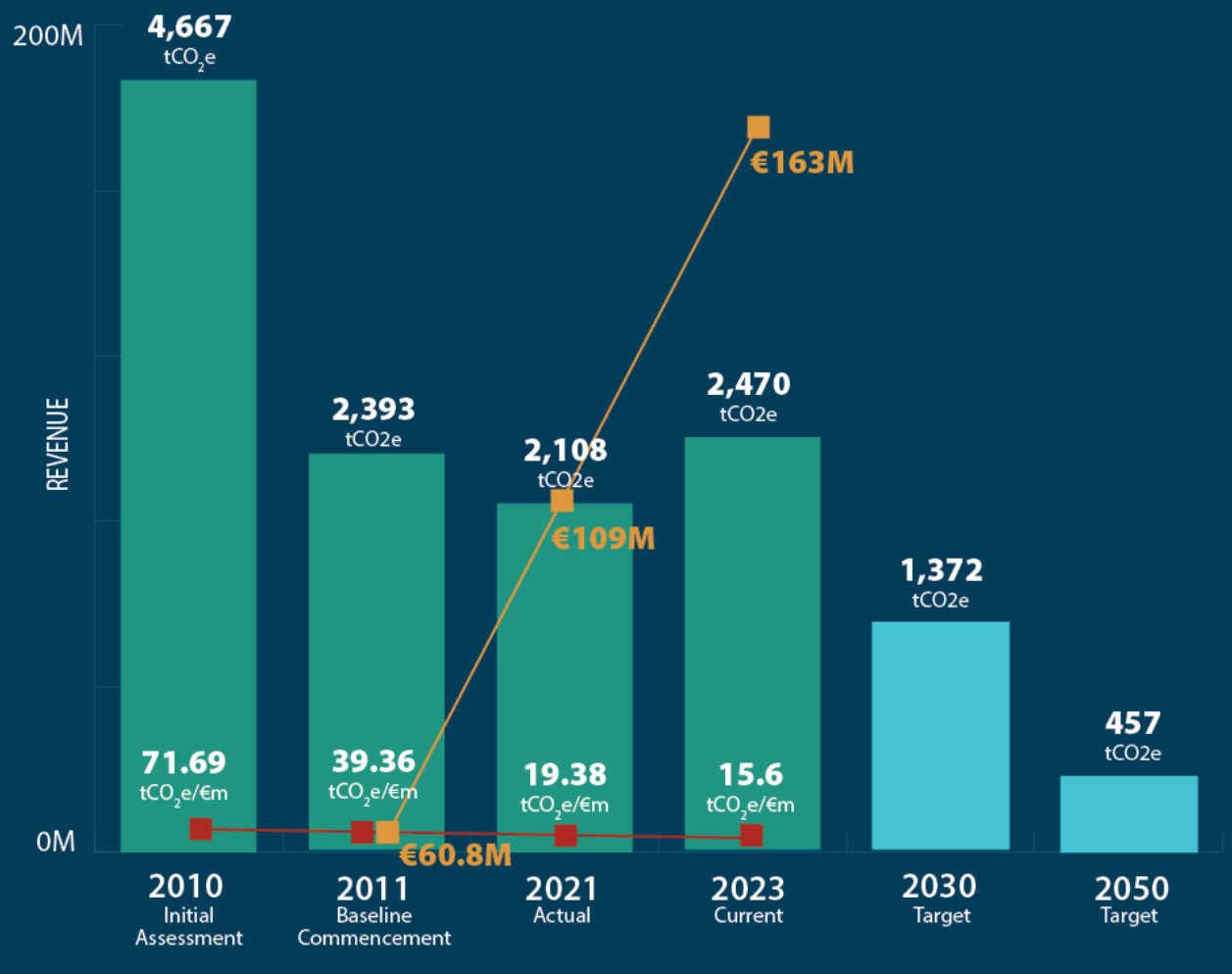
Our latest report for 2024 demonstrates that we have surpassed our short term targets. We have achieved our 2030 targets in 2023 and are well on our way to achieving our 2050 target of <8 tCO_2e/€m. Our initial emission intensity tCO_2/€m has reduced from 39.36 to 15.6 or 61% in total.

Despite our progress for the past 13 years, and in tandem with more recent awareness and carbon data with respect to climate change, we have begun a process of reassessment to reset our journey. During 2024, we will determine and launch our next phase; setting out our plan and targets for the next decades of our journey to Net Zero.

This report captures our journey to date, detailing our approach and outlining how we report today, whilst also summarising our decarbonisation toolkit approach to support our journey to Net Zero.

OUR CARBON JOURNEY

2010 - 2023



Carbon Footprint Total tCO2e (Actual)

Carbon Footprint Total tCO2e (target - as set out in 2010)

Emissions Intensity tCO2e/€M

Revenue Activity €M (2011 - 2023)

GROUP STRUCTURE

Note: ** Self assessment with CEMARS in 2023
*** Included in EPS numbers currently

PURPOSE

Safely delivering sustainable water and wastewater resources for our customers and their communities, whilst fostering and promoting ethical standards with the highest of integrity

VISION

We aim to be the best and most rewarding place to work for our teams, to be our customer's outstanding partner of choice and we are committed to being a Net Zero, sustainable business

VALUES

We value: Our People, Inclusivity, Diversity
We value being: Progressive, Experts at what we do, Supportive, Reliable, Truly Customer Focused

OUR ROLE
OUR RESPONSIBILITY
OUR CHALLENGE

We started on our carbon measurement and reduction journey back in 2009 not only because we were becoming aware as an organisation of our carbon emissions impact but also due to the collaboration and encouragement from some select customers, in particular Anglian Water/@one Alliance.

At that time, we had began a journey where we had partnered with the Achilles Carbon Reduce Programme which has set the baseline for our focus and efforts since that initial starting point. Our purpose and vision as a business puts us front and centre in the multiple challenges of addressing our climate impacts and ultimately playing our part in society to make the change for the better.

Our role is to play our part and state our approach to achieving net zero emissions as a result of our activities and operations as a business and to ensure we support our customers and clients in achieving theirs. Our responsibility is to lead by example in our approach, to partner, collaborate, share knowledge and experience and to ultimately bring our supply chain partners and stakeholders on this journey with us.

Our challenge is to set out a strategy and approach that is ambitious, will have a positive impact on our footprint and one that will get us to Net Zero as soon as is practicably possible in a sustainable way for our businesses. Our customers and their national governments across our main territories throughout the United Kingdom and Ireland have set targets for achieving decarbonisation which include achieving Greenhouse Gas (GHG) emission reductions to Net Zero by 2050 in the UK and for some clients achieving it by 2030 and 2040. The Government of Ireland has recently published the Climate Action Plan 2024. This plan sets out a roadmap for taking decisive action to halve Ireland's carbon emissions by 2030 and to reach net zero no later than 2050.

For us as a business we need to asses what we can do to continue travelling this journey that we started in 2009 but we need to accelerate our pace in carbon reduction. We have achieved 51% reduction in 13 years (against a 2010 baseline that has been measured and verified) so have a journey to go yet to achieve 100% decarbonisation. We also have to remain practical in terms of what we can achieve and what is sustainable for us as a business to implement as we take the next phase of our decarbonisation journey.

Limiting global temperature rise to less than 2°C and ideally less than 1.5°C by the end of this century puts a serious responsibility and challenge on any sector but especially to any business working in the water sector and the provision of water, wastewater, pumping and treatment solutions. Our abiding challenge in EPS is to step up more and support our utility clients and all of our multiple sector customers in progressing to an ultimate net zero economy and environment.

OUR APPROACH

Understanding our emissions across scope 1, 2 & 3

Scope 1:

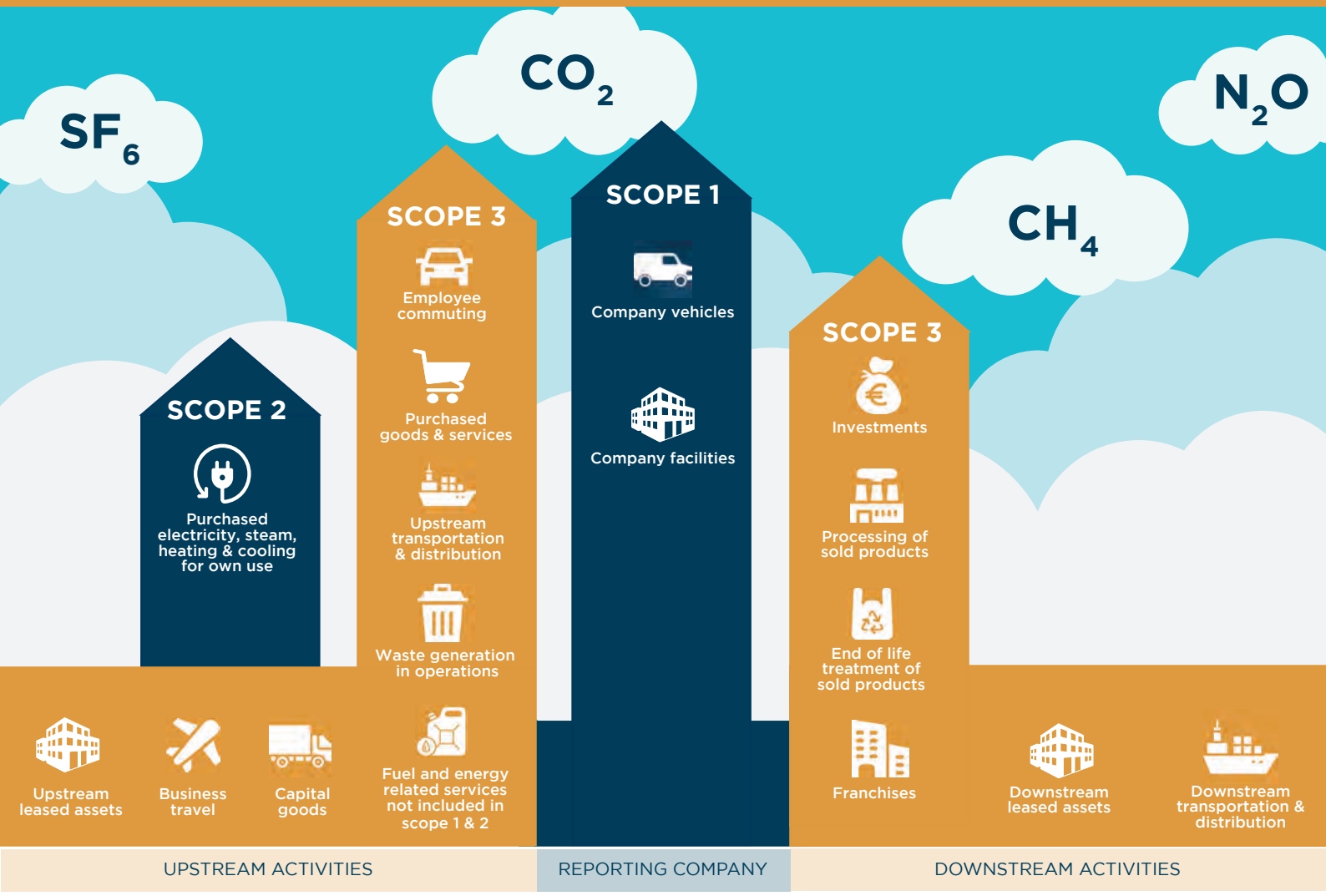
Direct GHG emissions that occur from sources that are owned or controlled by our companies which includes emissions which are process, stationary, fugitive and mobile including the burning of fossil fuels (e.g. fuel combustion of company vehicle fleet)

Scope 2:

Indirect greenhouse gas emissions from the consumption of purchased electricity, heat or steam and the export of any electricity we generate.

Scope 3:

Other indirect emissions associated with business travel, outsourced activities, transmission and distribution losses from the electricity grid.

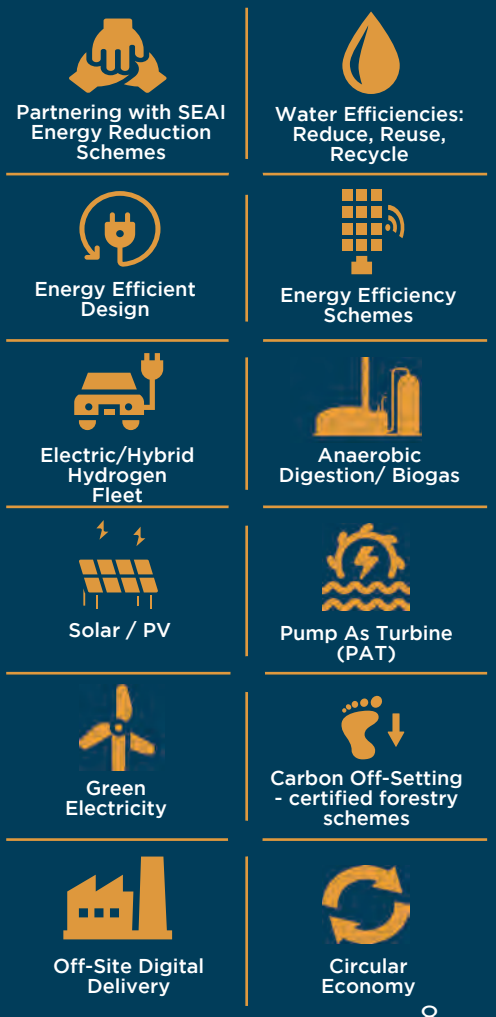


OUR APPROACH

Achieving net zero is transformational for our business and for the markets in which we are active. As such, much of what is required is outside of our direct control. For upstream and downstream carbon emissions EPS will collaborate on solutions to reduce emissions with current suppliers in our value chain. What is in our control is our approach and commitment, and achieving net zero as a business is a journey we ultimately do not have a full picture of yet or what form it will take. Our approach and strategy, however will be built on the following:-

1. Provide leadership and example to all of our stakeholders and supply chain partners
2. Set ambitious targets and priorities to decarbonise
3. Utilise technology to reduce our reliance on fossil fuel energy consumption
4. Utilise technology to harness as much renewable energy as possible
5. Promote and achieve circular economy principles and objectives as we grow our business activities and our supply chain
6. Set out our decarbonisation priorities including:-
   - Reducing /avoiding greenhouse gas emissions (GHGE)
   - Utilise 100% green electricity and invest in renewable energy technologies
   - Removing any residual and difficult to avoid emissions by natural sequestration measures with credible and certified off-set schemes located within our communities in the first instance
7. To further increase the use of digital technology in the planning, design and delivery of projects for our clients using an array of digital engineering tools and BIM technologies such as 3D Modelling, 4D Planning and laser scanning. This in tandem with off-site construction will significantly reduce the carbon footprint of our projects as well as reducing HGV/transportation movements, site plant machinery requirements, site labour and time requirements, temporary and forms works.
8. By further promoting an energy savings ethos and culture across all our offices and operating sites via toolbox talks, workshops, training, monitoring, posters and signage, newsletters, email alerts, company intranet and social media platform updates as well as running regular staff competitions, employee surveys and other incentives to encourage energy conservation.
9. Supporting our employees to carry out energy audits and retrofits in their homes.

OUR DECARBONISATION TOOLKIT



REPORTING ON OUR PROGRESS

Currently we report on our progress in energy reduction through our energy management plan and external verification and audit annually with the NQA and for our Carbon with Achilles.

We have explored a number of alternative methods of reporting during 2022 which included:

- Science based targets initiative (SBTi)'s Corporate Net-Zero Standard. This standard allows companies to set science-based net-zero targets consistent with limiting global temperature rise to 1.5°C.
- Streamlined energy and carbon reporting regulations
- In accordance with PAS 2060 externally verified

TOITŪ CARBON REDUCE ISO 14064-1 ORGANISATION

We continue to report our emissions and progress against our targets and strategy annually. Our ongoing alignment with ISO14064-1:2018 and continued verification by Achilles carbon reduction will ensure external validation.

OUR STARTING POINT

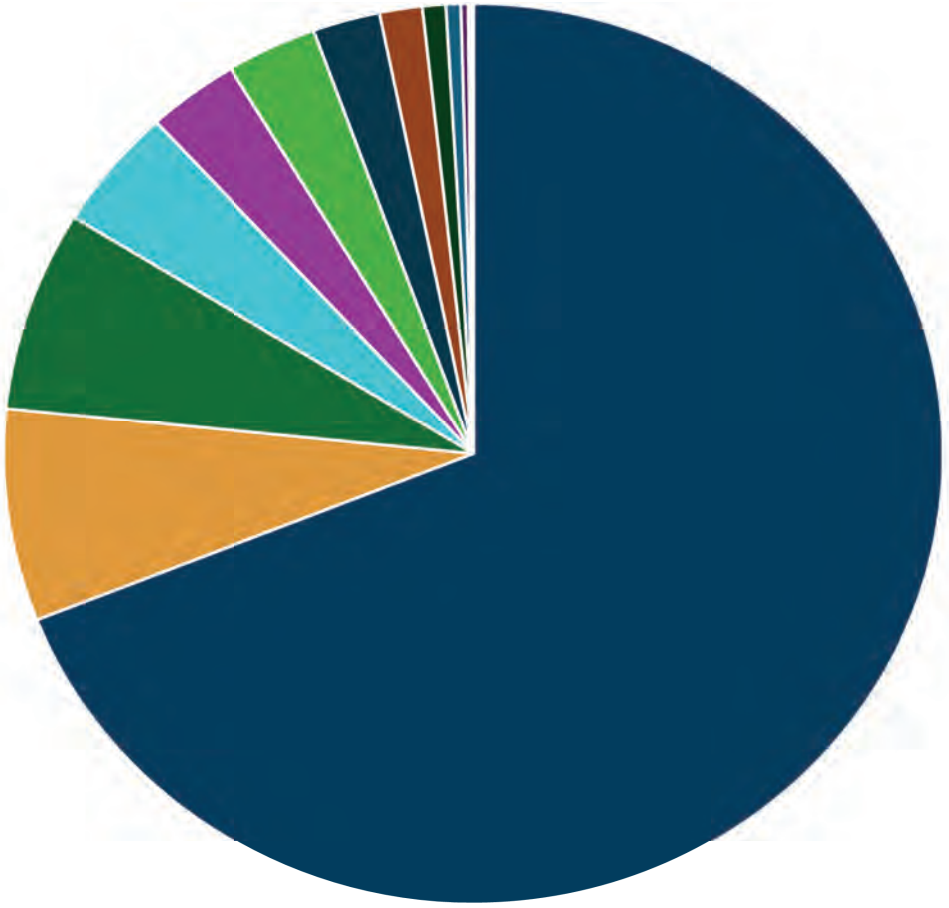
Currently, EPS meets the requirements of carbon reduce certification having measured our greenhouse gas emissions in accordance with ISO14064-1:2022 and we are committed to managing and reducing our emissions in respect to our operational activities. We transitioned our standard to ISO14064-1:2018 in 2022.

CARBON INVENTORY

	2011 Base Yr	2021 tCO_2e	2022 tCO_2e	2023 tCO_2e
Scope 1	1,115.62	1,535.77	1,571.04	1,840.26
Scope 2	287.90	160.95	218.57	190.44
Scope 3	989.97	411.9	411.03	439.76
Carbon Footprint Total	**2,393.49**	**2,108.62**	**2,201.72**	**2,470.46**
Emissions Intensity tCO_2e/€M	**39.36**	**19.38**	**17.80**	**15.60**
% Reduction in Emissions Intensity tCO_2e/€M	**N/A**	**27.84%**	**30.91%**	**37.56%**

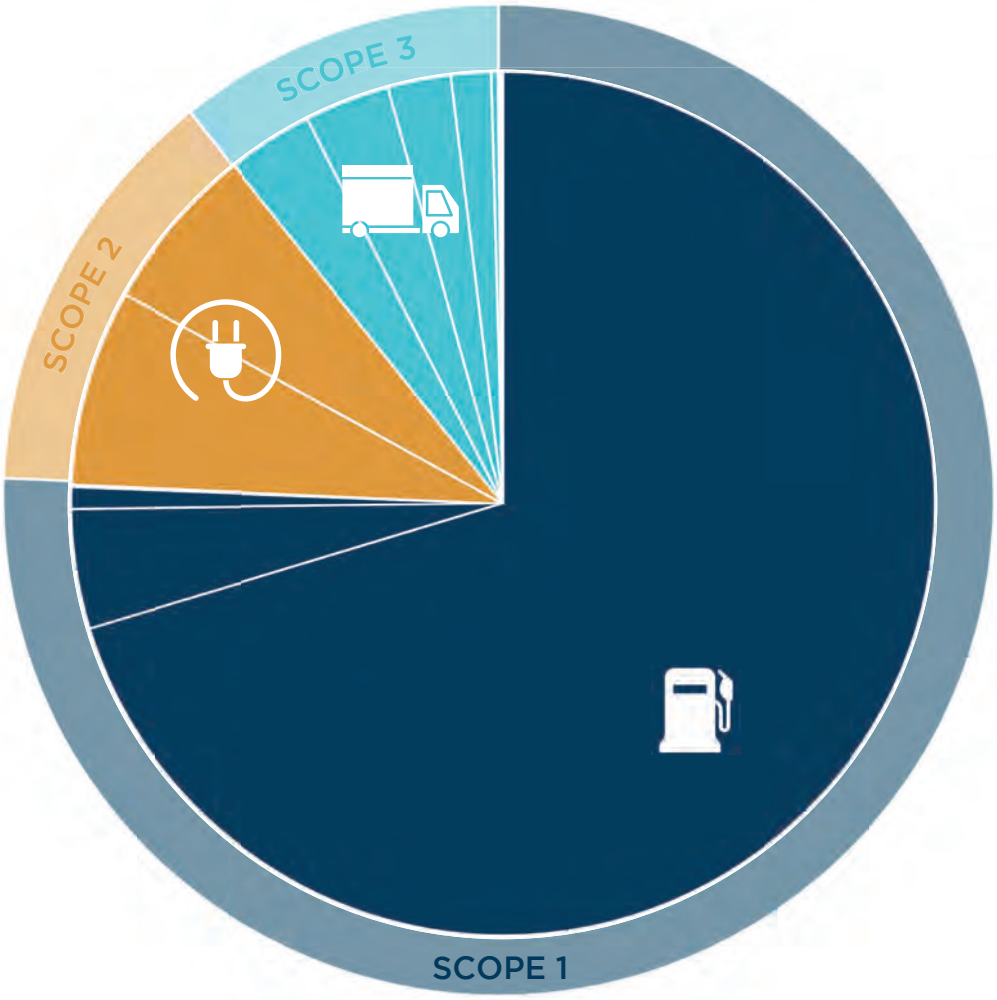
Note: 2010 starting point was 4667.82 tCO_2e. Emissions Intensity was 71.69 tCO_2e/€M

2023 CARBON EMISSIONS (tCO_2e) BY SOURCE



Source Activity	2022/2023 (tCO_2e)
Diesel Retail Station Biofuel Blend	1,704.17
Freight Road - All Trucks (average)	188.46
International Electricity Ireland	177.78
Burning Oil/Kerosene/Parafin	108.28
Freight Shipping Container (8000+ TEU)	78.11
Car Average (Unknown Fuel Type)	77.27
Freight by Air (Long Haul Average)	57.09
Air Travel (Short Haul Average)	36.26
Natural Gas	19.75
Electricity UK (Generation) (2013 Methodology)	12.66
Petrol Retail Station Biofuel Blend	6.07
LPG	1.99
Electricity UK (T&D Losses) (2013 Methodology)	1.14
Car Average (Petrol)	1.04
Ferry Travel (Car Passengers)	0.28
Car Average (Diesel)	0.13
Total Gross Emissions	2,470.46

2023 SCOPE EMISSIONS CATEGORY BREAKDOWN



Activity	Scope	Emissions (tCO_2e)
Diesel Retail Station Biofuel Blend	Scope 1	1,704.17
Burning Oil/Kerosene/Parafin	Scope 1	108.28
Natural Gas	Scope 1	19.75
LPG	Scope 1	1.99
International Electricity Ireland	Scope 2	177.78
Electricity UK (Generation) (2013 Methodology)	Scope 2	151.64
Freight Shipping Container (8000+ TEU)	Scope 3	78.11
Car Average (Unknown Fuel Type)	Scope 3	77.27
Freight by Air (Long Haul Average)	Scope 3	57.09
Air Travel (Short Haul Average)	Scope 3	36.26
Petrol Retail Station Biofuel Blend	Scope 3	6.07
LPG	Scope 3	1.99
Electricity UK (T&D Losses) (2013 Methodology)	Scope 3	1.14
Car Average (Petrol)	Scope 3	1.04
Ferry Travel (Car Passengers)	Scope 3	0.28
Car Average (Diesel)	Scope 3	0.13

CASE STUDY 1

ELECTRIC VEHICLES & CHARGE POINTS

EPS marked World Earth Day by unveiling the latest additions to the company's extensive fleet – two electric Renault Kangoos as well as the installation EV charge points at our offices in Mallow, Ballyhaunis Naas, Bangor and at the Dundalk and Midleton Wastewater Treatment Plants.

We have added 6 additional hybrid vehicles to our fleet. Our vehicle fleet is fitted with a telematics system (GPS tracking) to allow the collection of work-related driving data for each vehicle. Analysis of this data not only helps to make our fleet more energy efficient, but it also allows our Energy and Fleet Managers to identify opportunities for the partial electrification of our fleet which began in 2020.

We are encouraging our 600+ strong workforce to consider the switch to electric and hybrid vehicles by installing electric charging points at our various locations and in their homes.

ELECTRIC
VEHICLES

CASE STUDY 2

Circular Economy in Practice - Laptops

Laptops are a core part of the hardware given to a large number of employees within EPS. The IT team currently manages 300+ laptops across the business.Generally, after approximately 5 years, the laptops can begin to show their age and slow down. But this does not necessarily mean that they have reached the end of their life cycle.

This began to happen to a standard Toshiba laptop, running basic applications such as Microsoft Word, Excel, Outlook etc., but lets examine how it's life was extended by our IT team. The RAM was upgraded from 4GB to 8GB and cloned over the drive with a new Solid-State Drive, without affecting the user's programs or settings and at the same time, speeding it up significantly and increasing its lifespan. Cloning a drive can normally take an hour and costs €30, while setting up a new laptop from scratch and transferring data can take between 3 to 5 hours at a cost of approximately €500, so maintaining and extending the laptop's life represents significant savings.

This kept the laptop in service for another 3/4 years but with the inevitability of upgrades from Windows 7 to Windows 10, Operating System updates and upgrades, the laptop inevitably slowed down. We got approximately 8 years service in total before proceeding to take it apart for spares - the hard drive, RAM and screen went to other laptops, helping them increase their lifespan.

CIRCULAR
ECONOMY

NO. OF LAPTOPS
274

SAVINGS PER LAPTOP
€530

TIME SAVED PER UPGRADE
5 Hours

TYPICAL LIFE-CYCLE
5 Years

EXTENDED LIFE-CYCLE
8 Years

CASE STUDY 3

SOLAR PHOTOVOLTAICS

A PV Solar array of 376 panels was installed at the EPS head office in Mallow, enabling us to produce clean renewable energy while saving on energy bills.

The PV solar panels produce a power output of 150 kWp, which in turn generates 86,800 KWh of electricity per year. This self generation of green energy provides 21.2% of the energy requirements at the Mallow site, helping us to achieve a reduction of 21 tonnes of CO_2 emissions per year.

21↓
TONNES OF EMISSIONS
(tCO2e) per year

21%
ENERGY REQUIREMENTS
for Mallow site

86,800
KWh OF ELECTRICITY
per year

CASE STUDY 4

ENERGY

- First DBO Water & Wastewater Solutions Company to receive ISO:50001:2018
- Generating renewable energy at 6 locations across Ireland
- Participation in EEOS credits programme (2014 - 2020) with 5,137,729kWh savings verified independently by the Sustainable Energy Authority of Ireland

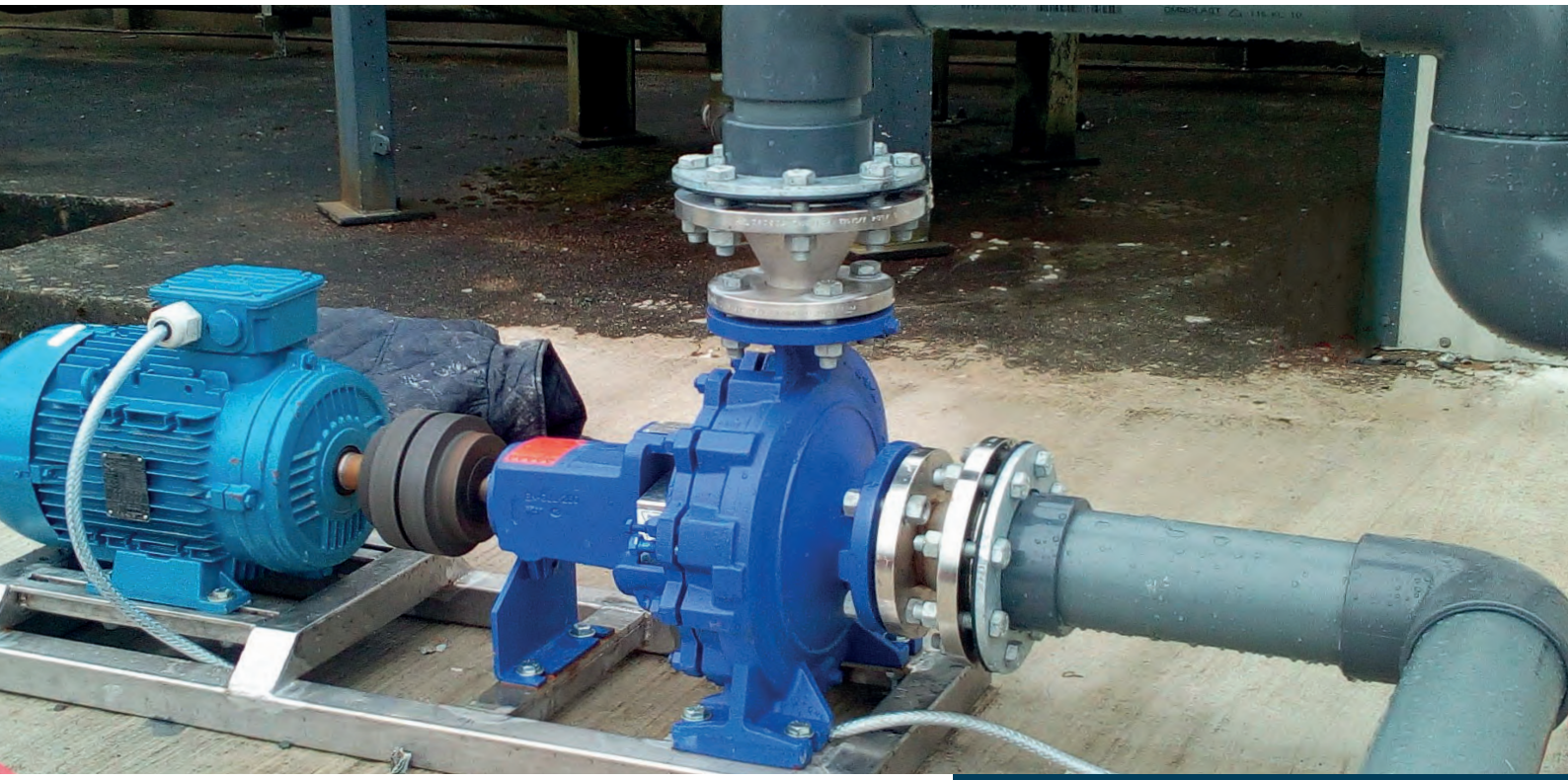
28
ENERGY CHAMPION LEADERS

5
ENERGY SOURCES

37.8
GWh/YEAR UTILISATION

CASE STUDY 5

PUMP AS TURBINE (PAT)



EPS supported the installation, maintenance and monitoring of a micro-hydropower energy recovery system at the EPS operated Blackstairs Group Water Scheme site in Co. Wexford.

The project was in collaboration with Trinity College, Dublin, and Bangor University. Installed to recover energy by means of a 'pump as turbine' (PAT). Since its start-up in October 2019 to the end of July 2021 the scheme has generated over 22,225 kWh of electricity which is equivalent to almost 5.2 tonnes of CO2 equivalent saved.

5.2↓
TONNES OF EMISSIONS
(tCO2e) per year

22,000
KWh OF ELECTRICITY
Oct '19 - Jul '21

CASE STUDY 6

ANAEROBIC DIGESTION & BIOGAS PRODUCTION

EPS builds and operates anaerobic digestion systems in Ireland at multiple municipal wastewater sites. Anaerobic digestion (AD) technology allows for the generation of renewable energy from the sludge treatment process.

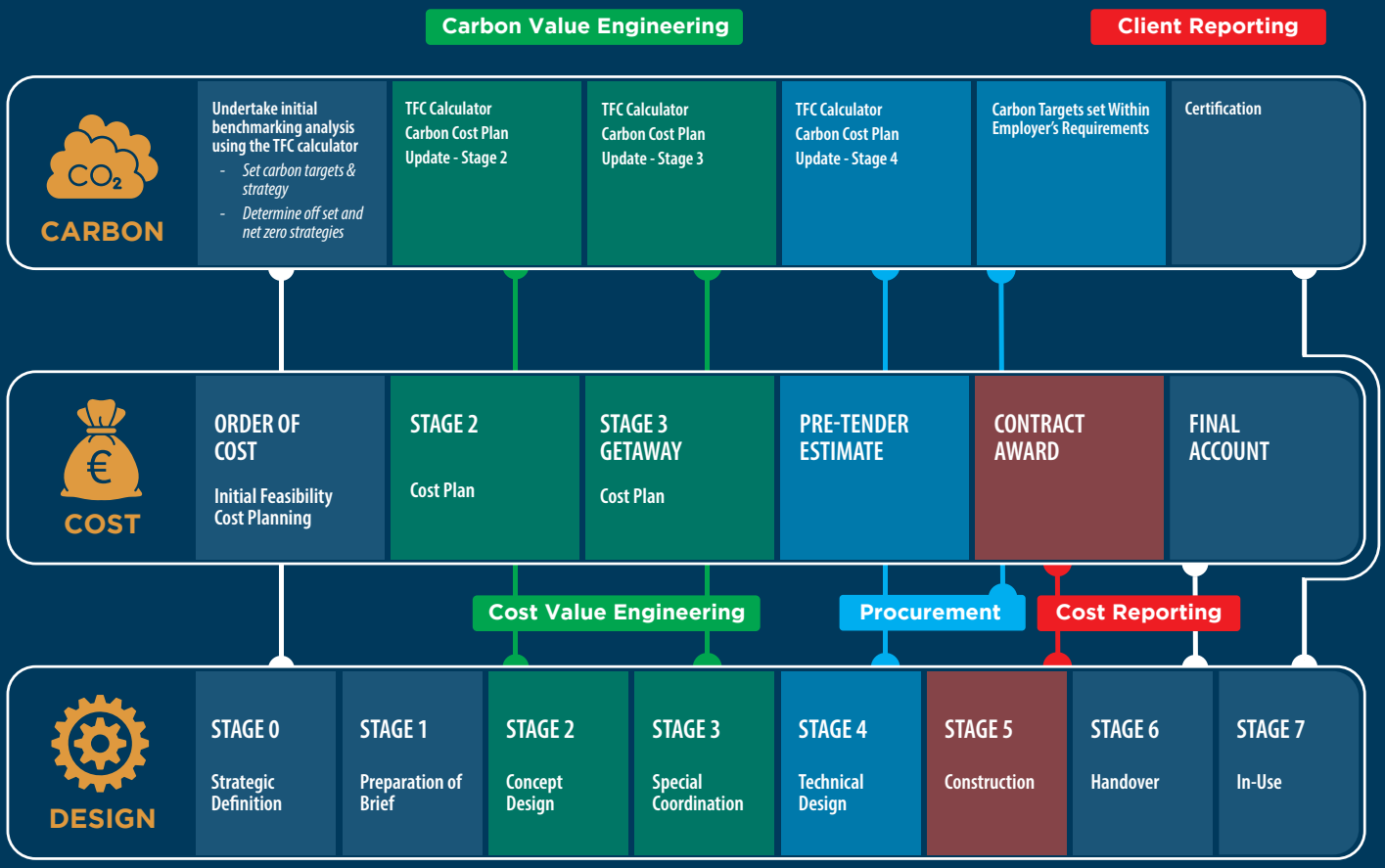
During AD, microorganisms break down the organic matter contained in the sludge and convert it into digester gas/biogas, a mixture of mainly methane and carbon dioxide, which can be used for electricity, heat and biofuel production. Anaerobic digesters producing biogas to power CHP systems are in place at several EPS operated wastewater treatment sites, producing in excess of 1.3 Megawatt hours of electricity each year which is the equivalent of 302 Tonnes of carbon emissions saved. Renewable electricity produced from AD/Biogas sources equates to approximately 8% of power requirements annually.

302↓
TONNES OF EMISSIONS
(tCO_2e), 2020

1.3
Mwh OF ELECTRICITY

8%
ELECTRICITY GENERATION

OUR CARBON TIMELINE



OUR CARBON HIERARCHY

APPROACH TO CONSTRUCTION ACTIVITIES

Focus on alternative material selection for our construction sites and manufactured products

Energy Efficient Design

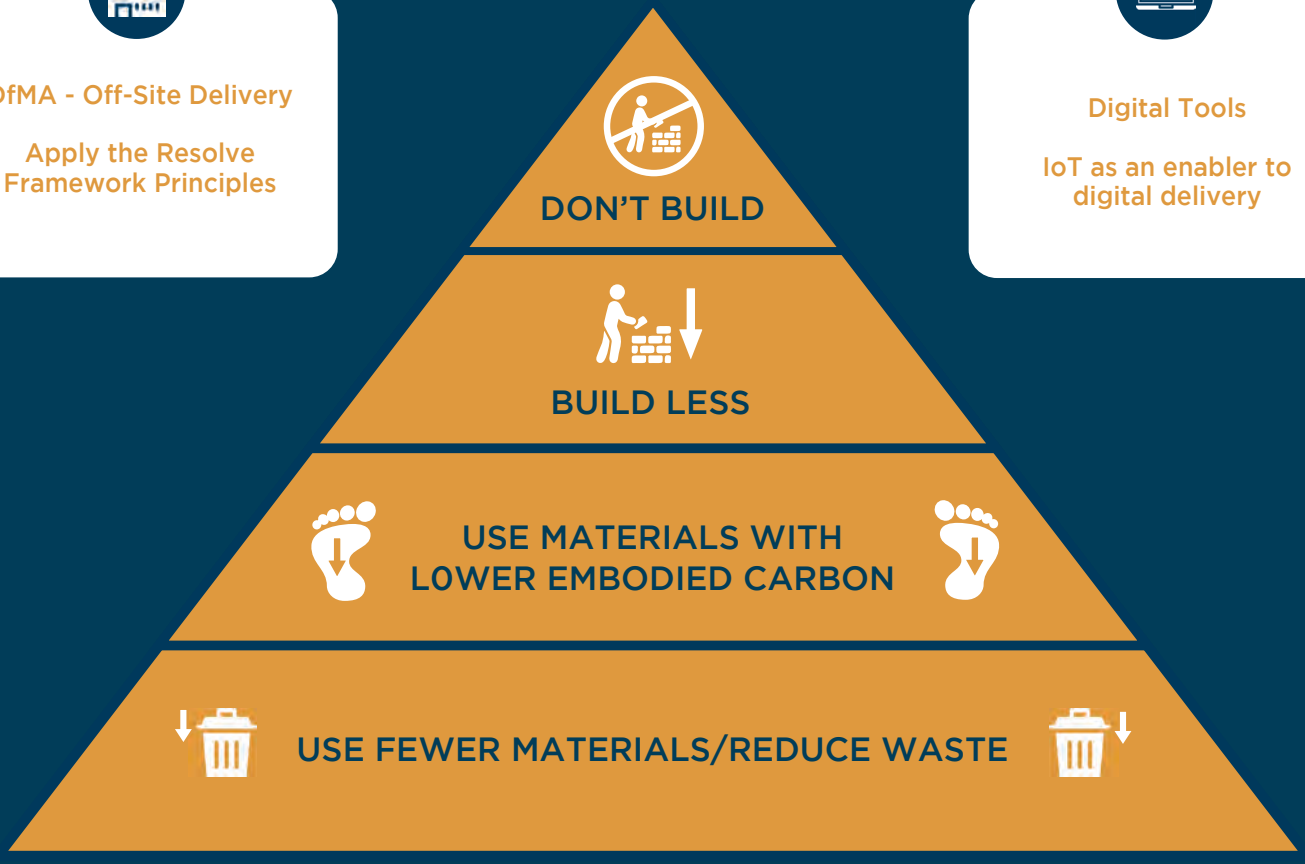
Circularity by Design

DfMA - Off-Site Delivery

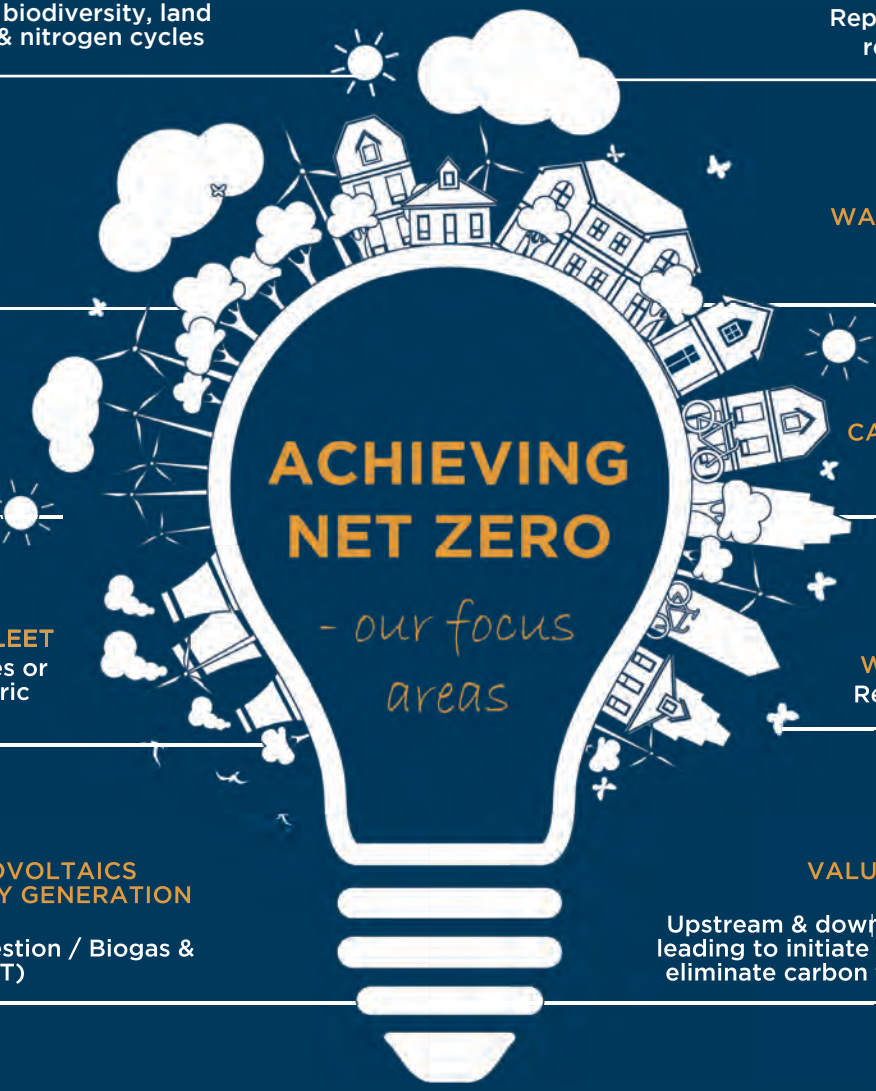
Apply the Resolve Framework Principles

Digital Tools

IoT as an enabler to digital delivery



OUR FOCUS AREAS TO ACHIEVE NET ZERO



RESEARCH AND INNOVATION FOR OUR PRODUCTS/SERVICES
In focus areas of water, biodiversity, land utilisation, phosphorus & nitrogen cycles

TRANSFORM OUR BUSINESS FROM LINEAR TO CIRCULAR
Move to zero waste
Repair, re-use, repurpose, remanufacture, recycle

REDUCE & ELIMINATE CONSUMPTION OF FOSSIL FUELS
Such as heating oil, diesel and petrol

WASTE MINIMISATION & REDUCTION
Including plastics

REDUCE OVERALL POWER USAGE & CONSUMPTION

CARBON OFF-SETTING
Certified forestry schemes

DECARBONISE OUR FLEET
Utilising electric vehicles or hydrogen fuel cell electric vehicles

WATER EFFICIENCIES
Reduce, Reuse, Recycle

INSTALL MORE PHOTOVOLTAICS (PV) & UTILISE ENERGY GENERATION SOLUTIONS
Such as Anaerobic Digestion / Biogas & Pumps As Turbines (PAT)

VALUE ANALYSIS OF OUR SUPPLY CHAIN
Upstream & downstream value analysis leading to initiate actions to reduce and eliminate carbon from our supply chain