

# Zeroing In: The Path to a Greener Future

NET ZERO BY 2045



Global: The boom of AI and its emissions

## How Can Google Make AI & Data Sustainable?

Google’s 2024 Environmental Report reveals that its overall GHG emissions have steeped by 13% in a year – thanks in no small part to AI and data centre energy consumption.

The revelation has raised the challenging question of whether it is possible to make carbon-hungry AI and data centres sustainable.

[Emissions up 13%: How Can Google Make AI & Data Sustainable? | Sustainability Magazine](#)

UK: Marine restoration for MNG and carbon offsetting

## The Potential of Restoring Marine Habitats

Marine Net Gain (MNG), a relatively new concept being discussed in the UK, aims to enhance marine habitats through development projects, moving beyond traditional methods of merely minimizing harm to the environment.

Under the MNG approach developers would be required to deliver measurable improvements to marine habitats to compensate for any loss to marine habitats that may occur due to their projects.

[Government response - GOV.UK \(www.gov.uk\)](#)

Scotland: Recycling

## Innovative Solutions to Drive EPS Collection and Recycling

EPS is a highly versatile material, containing 98% of air and 2% of polystyrene. It is widely used in various industries, including packaging, pharmaceutical and construction products.

EPS recycling initiatives are incredibly important for reducing environmental impact by conserving energy and resources that would otherwise be used in producing virgin materials.

[The BPE Expanded Polystyrene Group | Volker Gruppe by BEWI find Innovative Solutions to Drive EPS Collection and Recycling in Scotland](#)

## Rail Carbon Tool

The Rail Carbon Tool is an online carbon reduction tool for the UK rail organisations to:

- calculate and analyse the carbon footprints of UK rail projects and activities
- identify and assess alternative low carbon options
- select low carbon solutions.

RSSB has provided the tool to help reduce the industry’s carbon footprint. It is part of the response to the carbon and energy requirements in the High Level Output Specification (HLOS) 2012: Railways Act 2005 statement.

The tool is free to use for UK rail industry organisations, and its combined functionalities and capabilities are specifically designed to enable lower carbon solutions to be identified with maximum effectiveness and with the least administration requirements.

[Rail Carbon Tool \(rssb.co.uk\)](#)

## Standards

### GHG Protocol Scope 3 Final Survey Summary and Proposal Report Now Available

In March 2024, GHG Protocol released a draft version of the Scope 3 Survey Draft Summary Report and Proposal Summary and held a review period to invite comments from individuals/organizations who completed the survey. The GHG Protocol Secretariat reviewed all comments submitted during the review period and has released the Scope 3 Survey Final Summary Report. In addition to receiving 354 responses to the Scope 3 survey, GHG Protocol received over 100 proposals on topics related to Scope 3. In tandem with the Survey Final Summary Report, GHG Protocol is releasing the corresponding Scope 3 Final Proposal Summary that includes:

- Accounting guidance for biogenic emissions and removals.
- Phasing out the spend-based method and moving toward primary data collection.
- Clarification on use of cradle-to-gate emission factors.
- Clarify the use of scope 2 market-based emissions data in scope 3.

[Scope 3 Proposals Summary - Final\\_0.pdf \(ghgprotocol.org\)](#)

## Innovations



### AN APP THAT ENCOURAGES GREENER EMPLOYEE TRAVEL

Fynch has created a plug-and-play solution that makes it easy for businesses to track employee travel for reimbursement purposes, as well as monitor the CO2 impact of employee mobility. Fynch tailors its platform depending on a given company's sustainability policy, so clients can alter the distance and mode of transport allowances for their staff.

When employees travel sustainably, like by walking or using public transport, they earn reward points that can be redeemed for sustainable gifts and activities.

<https://fynchmobility.com/en/>



### DYNAMIC MOORING: A GAME-CHANGER IN OFFSHORE WIND

The Irish company has designed and pioneered a modular, lightweight platform that can be deployed in far deeper waters than previously possible for offshore turbines. The three pivoting arms on the outside of the platform are anchored to the seabed, and these cables run over the tripod arms to connect to a counterweight underneath the platform in the centre.

This innovative counterweight system enables dynamic mooring, meaning the platform can move up and down and side to side with the movement of the waves while minimising tilting. By reducing tilting, it keeps the pitch angle (the angle of the turbine blades) below five degrees, which cuts unnecessary wear and tear on the turbine.

<https://gazellewindpower.com/>



### DIRECT AIR CAPTURE INSPIRED BY THE HUMAN LUNG

The Los Alamos-based company said it aims to create a "carbon orchard" capable of capturing and sequestering up to 2 megatons of carbon dioxide from the atmosphere annually. The facility also seeks to make direct air capture more accessible by "driving a tenfold reduction" in cost compared to current standards, bringing the price tag down to under \$100 per ton.

Unlike most other facilities, Orchard One will collect carbon from the atmosphere through passive contact. This method relies on a sorbent technology created by Spiritus — which helps pull carbon dioxide from the air over a porous, solid-phase material — instead of utilizing industrial fans which increase energy consumption.

<https://www.spiritus.com/>