

Sustainability Report

2024

A responsible business

We are committed to being a responsible business.

Aligned to our purpose and a key element of our strategy, we are taking steps to protect and preserve the natural environment. Our products and our manufacturing processes are designed, built and managed in a way that enhances their value to society and our environment. This benefits our customers enabling them to adopt and adapt to clean technologies that provide a more sustainable future.

We manufacture a number of products that make a positive contribution, making the world more sustainable and improving the quality of life. Through their life, our products typically save tens or hundreds of times the CO₂ emitted during manufacture.

Alignment to strategy

To improve the execution of our strategy and deliver our sustainability goals we have set three strategic execution priorities for the coming years:

1 Big positive difference

- a. Keep our people safe, aiming for zero harm.
- b. Create a diverse, inclusive and engaged company.
- c. Reduce our environmental impact.

2 Delight the customer

- a. Be the partner of choice for our customers.

3 Innovate to grow

- a. Win in our core business, helping our customers become more sustainable.
- b. Increase our exposure to four faster growing markets: Semiconductors, Healthcare, Clean Energy and Clean Transportation.

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Our environment

We are making good progress towards our 2030 goals.

2030 environmental goal	2024 progress
Reduce absolute emissions directly from the company's operations and indirect emissions from purchased energy (scope 1 and 2) by 50% by 2030 from a 2015 baseline.	Total GHG emissions (tCO ₂ e) were 152,871 tonnes, a 3% decrease from 2023 and a 55% decrease over our 2015 baseline. This reduction was achieved through several energy efficiency projects across the group.
Reduce total water withdrawal and water withdrawal in water stressed areas by 30% from a 2015 baseline.	Total water withdrawal was 1.61 million m ³ ; which is a 6% decrease over 2023 levels and a 31% decrease over our 2015 baseline. This reduction was driven by our investment in water recirculation projects through 2023 and 2024, better water management practices and changes in product mix water withdrawal intensity – measured at 1,459m ³ /£m, compared to 1,543m ³ /£m of 2023. Total water withdrawal in water stressed areas was 341,052m ³ . This is 2% higher than 2023, reflecting business growth and some changes in product mix. We have declined by 21% compared to our 2015 baseline.
Reduce other indirect absolute emissions related to materials sourcing, logistics and services (scope 3) by 15% by 2030 from a 2019 baseline.	We completed a comprehensive scope 3 inventory screening exercise with a subsequent improvement in reporting methodology. Details of our scope 3 screening exercise can be found on pages 41 and 42 of the annual report.
Procure 80% renewable and nuclear electricity by 2025 and 100% by 2030.	In 2024, we reached the milestone of 75% green (renewable and nuclear) electricity. Our total energy consumption (fuel and electricity) was 916.0 GWh for 2024, which is 6% lower than 2023. We invested in a new solar photovoltaic (PV) system at our US Fostoria site, which is due to come on line next year and will increase our self-generation capability to 0.52% (of total energy) next year.

Climate Action

Pursuing Carbon Neutral Operations by 2050

We are committed to decreasing our carbon emissions and lowering our energy consumption. Our targets were validated as science-based (SBTi) targets in 2023 and are aligned with the below 2°C ambition for our scope 1 and 2 commitment.

63% of our manufacturing footprint (38 out of 60 sites in 2024) is certified to ISO14001 environmental management system standard, resulting in more efficient use of resources and reduction of waste. This demonstrates our commitment to continuous improvement and meeting the expectations of our customers.

Energy performance in 2024

Our scope 1 and 2 greenhouse gas (GHG) emissions come from our manufacturing operations and represent the part of our footprint that we can directly influence – by changing the way we use energy in our facilities.

- Scope 1 GHG emissions (tCO₂e) from stationary fuel combustion were 109,071 tonnes and scope 1 GHG emissions (tCO₂e) from process and mobile emissions were 1,940 tonnes (of which process emissions were 1,693 tonnes). For 2024, total scope 1 GHG emissions (tCO₂e) was 111,011 tonnes, which is a 0.4% increase over 2023 values and 46% decrease over 2015 value.
- Market-based scope 2 GHG emissions (tCO₂e)¹ were 41,860 tonnes, which is a 11% decrease over 2023 values and 69% decrease over 2015 values.

Our GHG emissions, such as carbon dioxide (CO₂), are mostly generated by the combustion of fossil fuels at various stages of our manufacturing processes. We track these using a reporting methodology based on Department for Environment, Food and Rural Affairs (DEFRA), which is applied globally (2024 Version 1, published 10th June 2024).

1. The scope 2 emissions figure was calculated using the market-based methodology. The location-based figure for the same period is 149,972 tCO₂e.

Climate action (continued)

Pursuing carbon neutral operations by 2050

Assurance

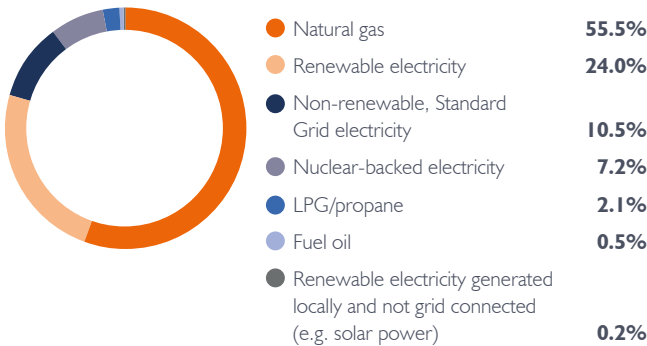
Our scope 1 and 2 GHG emissions data is verified to ISAE3000 standard by a third party and can be found on page 42 of the Annual Report.

We have updated our calculation methodology during the year to strengthen the quality of our data. Details can be found in the Basis for Reporting, which is available on request at investor.relations@morganplc.com.

Our decarbonisation roadmap

We continue to improve the efficiency of our gas-fired kilns and move to electrically fired options for some kiln types, where feasible. For further information on our path to net zero, please see our full Task Force on Climate-Related Financial Disclosures report.

Energy mix



Other energy efficiency and ‘green’ generation projects in 2024

Energy efficiency

- Atlacomulco – compressed air including automatic shut-off of compressors (previously left running), and air leak monitoring and repair.
- Atlacomulco – Replacement of translucent roof panels – natural light.
- MMTCL Gujarat – moved from natural gas to electric oven for annealing.
- MTCS Shanghai – Recovery of waste heat (air compressors) to pre-heat domestic water.
- Redditch – Production optimisation – compressing of three shifts into two.
- SMC Shanghai – Compressed air external line replacement – reducing air leaks and air compressor heat recovery for use in domestic water system.
- TCK Korea – Compressed air energy monitoring lead to improved performance and reduced compressor size.
- TCK Korea – Wool-bin fan speed adjustment to reduce consumption during down periods

Green energy generation

- Fostoria – Solar farm on land adjacent to plant.
- SMC Shanghai – Solar panel system on the roof of the production site.

Case study

On-site solar installations reduce environmental impact

In 2024, at our Fostoria Plant, US, we have completed an on-site solar power installation, which will generate 3.1MkWh a year, and result in a 13% reduction in market bought electricity to support this site. The facility will be in use in 2025.

We aim to continue investment in renewable energy to drive progress towards our carbon neutral target.

Water conservation

Managing our impact

We use water to cool and clean our manufacturing equipment and components, and for sanitary purposes. In order to ensure responsible water use and recycling, our conservation initiatives target water use at manufacturing facilities with the higher consumption or those located in geographic areas where water is scarce. By improving our water usage we will positively impact the local communities in which we operate, and therefore society more generally.

For 2024, the list of water-stressed countries was revised to also include Belgium, Chile, and Singapore, in addition to Australia, China, India, Italy, Mexico, Spain, Turkey, and the UAE. Our sites in the state of California, USA, are included in our water stress figures, based on water stress issues within the state. Following this, we have restated our 2015 baseline and all metrics are now compared to the new baseline.

We have made investments in water cooling recycling systems (see case studies overleaf), and upgraded welfare facilities. We have also implemented rain water harvesting at some sites.

Other water saving projects in 2024

Water-stressed areas:

- MMTCL Gujarat: Conversion from conventional cooling tower to adiabatic cooling.
- MMTCL Gujarat: Low temperature evaporator water recycling.
- MMTCL Gujarat: Rainwater harvesting storage tank (WIP).
- Atlacomulco: Rainwater harvesting for bathrooms services.

Water reduction:

- Stourport: Closed loop water cooling of ball mills delivered significant water use reduction.

Case Study

Saving water through efficient reuse

In 2024, our Fostoria site, USA, successfully installed a new water cooling system on their high temperature furnace. This new system not only cools the furnace but also reuses the water within the system, promoting sustainability and water conservation.

The previous system was a single pass system that required large quantities of fresh water, but with the installation of the new system, we anticipate a saving of approximately 7.5 million gallons of water annually.

Case Study

Steps taken to reduce water consumption

In late 2023, our Stourport site, UK, invested in a water recirculation system to reduce water consumption. Site water consumption was reduced by 29% at the end of 2024 compared to the same period the previous year.



Our people and communities

Having people who bring a diverse range of talents and perspectives, and who feel engaged in their role, is of paramount importance to our long-term success.

Our Morgan Code is the set of principles which governs our behaviour and guides the actions we take. We use our 'Your Voice' engagement survey to listen to our people and take action where required. This helps us to achieve our strategic aim of delivering performance and value creation for our stakeholders.

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Health, safety and wellbeing

We believe that everyone in Morgan Advanced Materials has a responsibility to keep themselves and each other safe. We rely on the expertise and diligence of our operational and safety team to uphold safety standards on our sites, ensuring all incidents are investigated so we can learn from them, and ensure appropriate controls are in place to prevent reoccurrence. We have biweekly reviews in place to review all severe incidents with the group CEO. There were no fatalities in the year, and no fatalities since 2012.

Our Group Environmental, Health and Safety (EHS) policy, available in local languages, is underpinned by a Company EHS framework, which provides guidance to our sites on how to put in place local EHS management processes. We also monitor compliance through EHS audits. We continue to maintain our thinkSAFE safety leadership programme, including our Visible Safety Leadership (VSL) and Don't Walk By (DWB) leading safety behavioural programmes, and embed our 'TAKE 5' programme to help employees to carry out simple safety checks to identify hazards and controls before starting any activity.

Protecting our people from the risks associated with exposure to hazardous materials is a fundamental part of our EHS management programme. This includes assessment and monitoring of controls as well as the provision of associated training. Every site has its own industrial monitoring plans to identify potential exposure against regulatory limits, and to set out its control measures to either reduce or remove exposure.

Progress in 2024

We successfully rolled our quarterly safety topics aligned with the key EHS challenges we are seeing in the business, whilst continuing to reinforce the 'TAKE 5' message with our teams. Our final quarterly topic for 2024 was on mental health and wellbeing.

Our people have access to an employee assistance programme in the UK and US, and we have trained mental health first-aiders or 'drop in' wellbeing clinics at other sites. Our sites also run local programmes to improve wellbeing, for example:

- Our New Bedford site invited a selection of furry friends from Peaceful Paws LLC, to help raise awareness of mental health issues and encourage people to seek help if needed.
- At our Lillebonne site the team organised a health awareness day, getting together to talk about health and specifically the prevention of breast and prostate cancer. The day gave our people the chance to speak to a health professional about prevention initiatives and support. Each participant left the day with a health box containing tests and information to help them monitor their health on a daily basis.

Case study

In 2024 our sites engaged in a number of community projects as follows:

- Our Atlacomulco, Mexico site collected and donated 146 items of winter clothes to the Red Cross, as part of their 'Sheltering a Morgan Heart' donation campaign.
- Our Atlacomulco, Mexico site collect bottle caps, donating these annually to the charity 'Fundación iEVO', which supports children with cancer and children with disabilities. Through this action the team are also helping to reduce plastic waste.
- Our MMTCL India team donated much-needed supplies to health centres and schools in their local community. The team demonstrated their commitment to their community through their support of education and healthcare. Their actions show the team's passion for education and healthcare access rights, to enable a fair start for everyone.



Our safety plans for 2025 and beyond

In 2025, we will continue to embed our 'TAKE 5' programme and maintain our focus on our ergonomics programme.

We will refresh our process safety, working with an external partner to reassess our process hazards and controls in relation to our high-risk processes. We will also be reviewing the associated maintenance programmes and taking the opportunity to roll out a process safety training programme to upskill local site teams

around process safety risk management. Good process safety risk management ensures our sites and equipment are in good working order which helps reduce the risk of failures that could cause significant injury or harm to the environment.

We will also launch a number of EHS Standards and guidance in the business, which will align with our EHS Framework, to provide enhanced guidance to the sites on how to manage their EHS risks and controls.

Our people and communities continued

Community

We aim to have a positive impact on the communities we serve, from supporting job creation and skills advancement to reducing energy and water consumption at our plants.

As our sites and operations are spread across the globe, we have the opportunity to work with many communities. We get involved at a local level and look to understand each community's priorities and concerns.

We want our people to have the freedom to support what they care about most. We share these stories through our internal social media platform Viva Engage, where you will often see the generous spirit and nature of our employees – from bake sales to cultural celebrations, and charity donations to sponsorship events.

- > We partner with a number of educational establishments. In 2024, we were delighted to partner with the University of Birmingham to award our annual 'Morgan Advanced Materials prize', presented to the highest scoring ceramic material individual project.
- > Our Women@Morgan China Chapter organised 'Pink Healing Journey', to care for the mental and emotional health of their colleagues. Our Thermal Products and Performance Carbon teams in China joined forces to focus on wellbeing.
- > Members of our Greenville, South Carolina team gave up their time to volunteer for 'Hands on Greenville' 2024. Our people were part of a group of over 2,500 volunteers giving back to their local community. The team had the opportunity to help the Freetown Community Center clean up, both inside and out, just in time for their annual summer camp programme.
- > In June our São Paulo, Brazil team came together in a month-long awareness campaign about blood donation and to voluntarily donate blood. June was chosen because it is a time when donations are often low, due to the arrival of winter with a greater need for donations and family holiday plans meaning many regular donors are not available.

Diversity and inclusion

We are committed to creating a diverse and inclusive culture as our people are the driving force behind our success. We aim to be open, engaging to all.

- > In Shanghai the team opened 'Mommy's Cottage'; a safe space for female employees. Employees can use this space as a private space to express breastmilk or as a place to meet to discuss life as a new mum.
- > On Veterans Day our St Marys, Pennsylvania, team celebrated the incredible service of their veterans with the commissioning of our new 'Veterans Tribute Wall'. This display, located in the front lobby, stands as a symbol of respect and appreciation for those who have served in the armed forces.

You can find examples of our engagement on LinkedIn.

Gender pay gap reporting

The UK Government introduced gender pay gap reporting regulations for companies with more than 250 employees. The phrase 'gender pay gap' refers to the difference in the average earnings of men and women within the same organisation.

In 2024, the average gender pay gap for our UK workforce was 17.6% (18.9% in 2023). Our full Gender Pay Gap Report is available on our website.

We met the board diversity targets set out in the Financial Conduct Authority's Listing Rules: our Board composition was 43% female, and the role of Senior Independent Director was held by a woman.

Workforce by gender: Members as at 31 December 2024			
Male		Female	
Board	All leaders	Board	All leaders
4	336	3	176
Male 57% (2023: 57%)	Male 66% (2023: 70%)	Female 43% (2023: 43%)	Female 34% (2023: 30%)
Executive committee	All Employees	Executive committee	All Employees
6	5,419	3	3,060
Male 67% (2023: 67%)	Male 64% (2023: 67%)	Female 33% (2023: 33%)	Female 36% (2023: 33%)
Senior leaders		Senior leaders	
35		17	
Male 67% (2023: 74%)		Female 33% (2023: 26%)	

