

## Our Approach to Climate Change

Climate change is seen as one of the biggest threats of our generation, requiring global action to both mitigate and adapt for the future.

Everyone can play a role in mitigating the impact of climate change. Companies, also need to play their part, to support worldwide efforts to keep temperatures below, or as close to 1.5 degrees Celsius of warming above pre-industrial levels as possible. Expert reports have shown the damage, particularly to developing countries and vulnerable communities, if warming increases above this scenario.

### Our Policies

As we develop and adapt, the economic and societal shifts required to manage climate change offer opportunities as well as challenges. ASM's [Safety, Health and Sustainability Policy](#) includes our commitment to managing the risks and opportunities of climate change.

**We will identify, assess, manage and report on risks and opportunities associated with climate change, including transition and physical risk.**

The many facets of climate change, including emissions, offsets, physical impact, legislation changes and insurance, for example, will be evaluated through ASM's risk management framework.

The Board, Chief Executive Officer and Management Team have responsibility for making the decisions that will steer ASM through these challenges and help us take advantage of opportunities. In practice, people all through the organisation can contribute to the management of climate change risks and opportunities, and the overall aim of contributing to the world's net zero carbon by 2050 goal.

### Our Management

ASM's approach to Climate Change has four foundational elements:

1. ASM's role as a key contributor to a sustainable low-carbon economy
2. Greenhouse gas emission reduction and offsets
3. Evaluating, assessing, and managing the physical impacts of climate change
4. Support and use of the recommendations from the Task Force on Climate-Related Financial Disclosures (TCFD)

## 1. ASM's role as a key contributor to a sustainable low-carbon economy

The materials and products produced by ASM play a key role in a low carbon future. Our rare earths, critical minerals and high-tech metals products are vital inputs for high-tech manufacturing and clean technologies.

ASM's proposed products are critical constituents in:

- Electric vehicles
- Wind turbines and control systems for solar panel arrays and robotics
- High-strength low-density steels and diverse industrial ceramics
- Solid oxide fuel cells and aerospace engines
- Semiconductors and fibre optics
- Electronics, microprocessors and data storage
- Medical imaging technology, kidney dialysis and dentistry

### Rare earths

Rare earths are in high demand for permanent magnets used in electric vehicles, wind turbines, robotics, personal technology and other advanced technologies.

ASM plans to produce a suite of rare earth oxides and products which may contain up to 15 rare earth elements (including neodymium, praseodymium, terbium and dysprosium)."

A modern 3MW wind turbine uses 600kg of rare earths. Hybrid and full electric vehicles contain large quantities of rare earths. A typical hybrid car contains approximately 28kg of rare earths, including 1kg in the motor and 10-15kg in the battery.

### Zirconium

Zirconium is used in various clean energy technologies, including solid oxide fuel cells that provide reliable and affordable portable power.

### Hafnium

Hafnium has a wide range of applications across new growth industries, with many likely to rely heavily on hafnium in the future. Some of these applications include thermoelectric materials for converting heat into electricity in vehicles, radiative cooling materials to replace air conditioning in buildings, and hafnium oxide nanoparticles in radiation oncology to destroy cancer cells.

### Niobium

Niobium is mainly used as an alloying element in steel to improve the strength of smaller, lighter components – particularly in the transport sector, where better fuel efficiencies and lower carbon dioxide emissions result.

## **2. Greenhouse gas emission reduction and offsets**

We are targeting a net zero carbon footprint because we believe it is the right thing to do and should give our business a clear advantage.

Our environmentally responsible approach to design and operations will help minimise our total footprint (water, energy, consumables and waste).

We will reduce our Dubbo Project greenhouse gas emissions by incorporating best practice principles into the design of our Dubbo Project and conducting ongoing assessment of energy options.

We have commenced through the development of registered carbon farming project under the Australian Government's Emissions Reduction Fund (ERF) to offset our carbon emissions.

ASM will report scope 1 and scope 2 emissions by operation, and category split scope 3 emissions where relevant. This reporting will also include renewable energy uptake.

ASM will be setting targets for greenhouse gas emission reduction as we work our way to net zero carbon by 2050.

## **3. Evaluating, assessing, and managing the physical impacts of climate change**

ASM is cognisant of the physical impacts of climate change.

The potential for water scarcity, increased bushfire risk, heat exposure and increased storm surges are some of the physical impacts we will evaluate and manage at our locations using our risk management frameworks.

## **4. Support and use of reporting in line with the recommendations from the TCFD**

The Financial Stability Board created the Task Force on Climate-Related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information. The Task Force recommendations consist of a framework that companies can report against. The framework headings are:

- Governance
- Strategy
- Risk Management including transitional and physical risks
- Metrics and targets

ASM will commence development its reporting in line with this framework.