



Australian Government
Great Barrier Reef
Marine Park Authority



Reef
Authority

SUSTAINABILITY STRATEGY



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Front cover © Commonwealth of Australia (Reef Authority).

Aboriginal and Torres Strait Islander readers are advised this publication may contain names and images of deceased persons.

The Reef Authority acknowledges the expertise, wisdom, and enduring connections that have informed the guardianship of the Reef for millennia. We pay our respects to the Traditional Owners as the first managers of this Land and Sea Country, and value their traditional knowledge which continues to inform the current management and stewardship of the Reef for future generations.



Chief Executive Officer's foreword



As Australia's lead management agency for the Great Barrier Reef Marine Park, we lead a global effort to preserve and protect one of the planet's most iconic, diverse, and breathtaking natural wonders.

I am proud to be leading an agency that is taking action on climate change and demonstrating leadership in supporting the reduction of emissions in the Australian Public Services to net zero by 2030. We were thrilled to receive the 2023 Department of Finance Gold award for 'Encouraging Environmental Sustainability through Procurement' which acknowledged the continuous work and commitment from the Reef Authority towards our Sustainability Strategy goals.

To limit the impacts of climate change on the Reef, we need to see substantially fewer greenhouse gases released into the atmosphere, and far more being removed. We also need to strengthen and build Reef resilience.

This strategy represents the strong commitment to reducing emissions through the delivery of Reef Authority services. We will do our part to reduce emissions, continue to set ambitious targets and embrace innovation to help drive a decarbonised Australian economy. By tracking and reporting on our emissions, and measuring our performance against our key targets, we will maintain our ethos of accountability and transparency.

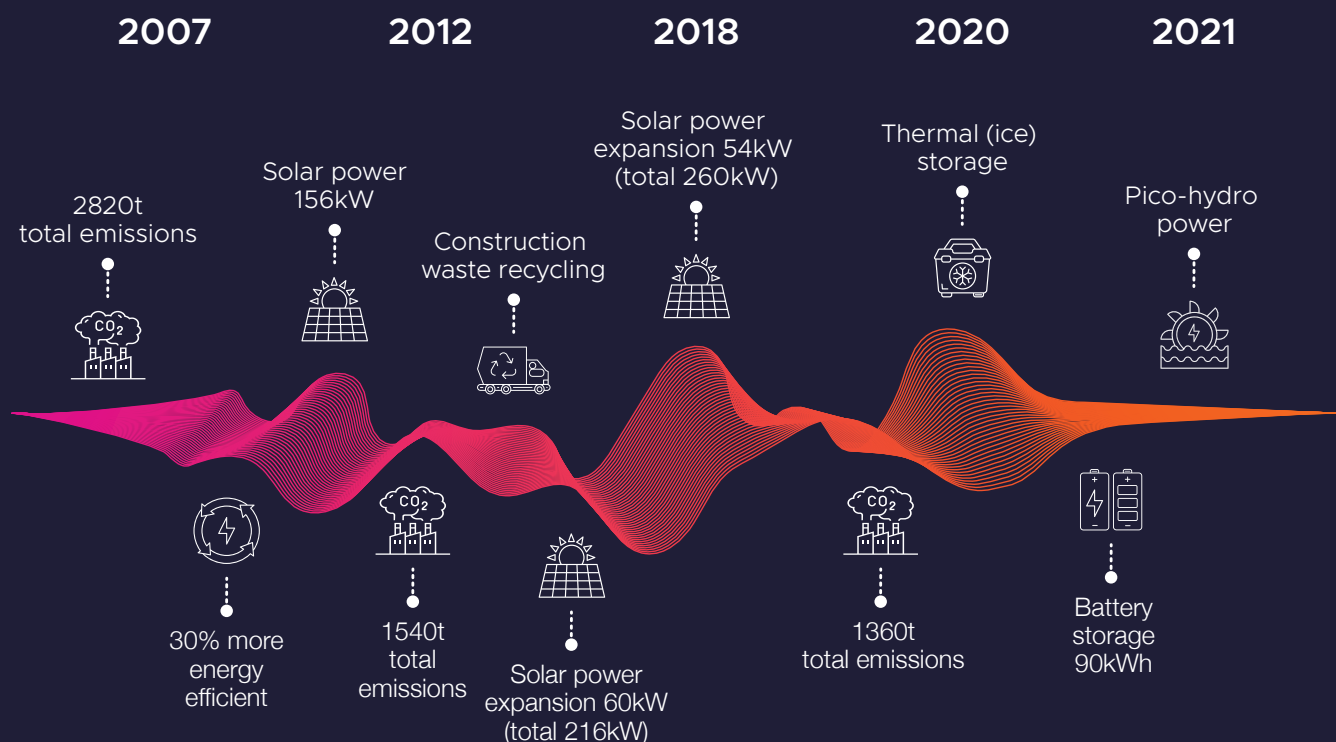
Our commitment

We will implement pollution prevention practices, reduce waste and efficiently use resources to meet specified targets using recognised government methods and position the Reef Authority as a role model for others to follow.

Our past sustainability journey

The Reef Authority emissions reduction journey started in 2007. We have since achieved our previous ambitious targets and will continue to stretch ourselves further by directly reducing emissions as much as possible and targeting net zero by 2030 through the Sustainability Strategy.

Our focus has been on retrofit actions to reduce grid electricity use such as energy efficiency initiatives and the installation of rooftop solar, small hydropower and energy storage systems.



By embracing innovation and collaborating with partners for change, we halved our electricity use in our highest energy use facility.

Our emissions profile

The delivery of Reef Authority services generates carbon emissions. These can be classified into Scope 1, Scope 2 and Scope 3. Our Sustainability Strategy will address all our greenhouse gas emissions.

Scope 1 emissions

Direct burning of fuels.



Diesel and petrol for road vehicles



Marine vessel fuels



Refrigerants



Stationary fuels (diesel & petrol)

Scope 2 emissions

Purchased electricity from fossil fuels.



Purchased electricity

Scope 3 emissions

All other activities that result in emissions.



Contracted marine services (marine fuels)



Contracted aerial surveillance (aviation fuels)



Business travel



Construction



Purchased goods



Consultancy services



Employee commute



Waste to landfill

Our sustainability focus areas

Our vision

Environmental sustainability is a critical element that underpins our management of the Great Barrier Reef Marine Park. Our vision is a healthy Great Barrier Reef for future generations.

The purpose of the Reef Authority is to provide protection and facilitate the long-term ecologically sustainable use of the Great Barrier Reef, and in doing so we are committed to sustainability in the delivery of Reef Authority services. Our Sustainability Strategy aligns with the Australian Public Service Net Zero by 2030 target and the Department of Climate Change, Energy, the Environment and Water's Environmentally Sustainable Procurement Policy.



Foundation

We will embed accountability, transparency, and responsible conduct to drive progress and support our sustainability vision, objectives and priorities. The foundation of our Sustainability Strategy is to establish robust governance and organisational capacity to embed, deliver and report on our sustainability goals.



Clean energy and clean air

We will continue reducing emissions from our operations by embracing efficiency, innovation, and collaboration with our partners.



Circular Economy

We will be guided by the principles of the Circular Economy by optimising product longevity and eliminating waste in our operations.



Nature Positive

We will embrace opportunities to actively restore, repair and build thriving ecosystems and use our buying power to support this.

Our recent progress against our targets

Recent sustainability achievements



We will continue to set and work hard to achieve our targets and report on our progress annually.

In 2023 the Reef Authority was the recipient of the Gold award for Encouraging Sustainability through Procurement by the Commonwealth Department of Finance Centre for Excellence in Contracting and Procurement.



Reef Authority Director Business Operations, Sascha Thyer and Assistant Director Sustainability, Dylan Furnell with the Assistant Minister to the Prime Minister, Assistant Minister for the Public Service, the Hon. Patrick Gorman MP

Laying effective foundations: strategy, governance and reporting

Our strategy includes robust governance and organisational capacity to embed, deliver and report on our sustainability goals.

Successful delivery of our strategy will require participation, engagement, and ownership from all our people to enhance and evolve our policies, processes and systems to support sustainability in everyday decision making. Our strategy supports the United Nations Sustainable Development Goals.

7 AFFORDABLE AND CLEAN ENERGY



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



17 PARTNERSHIPS FOR THE GOALS



Our Sustainable Procurement Framework will ensure we use our buying power to achieve our sustainability goals.

Foundation

Capability and accountability

In 2023 we established a dedicated sustainability team, within our Corporate Services branch to provide advice to our Chief Operating Officer to guide the strategic direction of sustainability for the Reef Authority.

Executive level support and engagement at every layer is fundamental to success. Our Executive Management Group have each embraced a role as Sustainability Champion for our key sustainability focus areas to accelerate actions and demonstrate leadership action on climate change in government operations. The Marine Park Authority Board will be updated regularly on progress against the Sustainability Strategy. By setting clear goals with measurable targets our performance can be effectively measured.



The 2024 Marine Park Authority Board

Executive Management Group Sustainability Champions



- Inform**
- Consult**
- Involve**
- Collaborate**
- Empower**

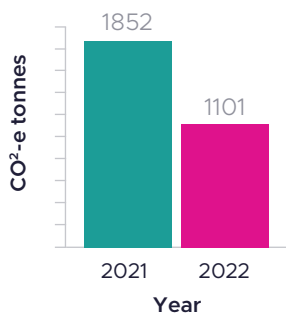
Reporting accurately and transparently

We will meet the requirements set by the *Net Zero in Government Operations Strategy* released in 2023 and any requirements of the Commonwealth Climate Disclosure Policy.

This includes reporting Reef Authority emissions annually. We are working to track and increase our visibility over supply chain emissions and build on our reporting of Scope 3 emissions.

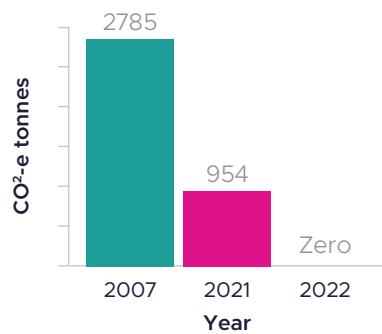
In 2007, the Reef Authority's total greenhouse gas emissions for Scope 1 and 2 were 2820 tonnes of carbon dioxide equivalent (CO²-e) excluding marine fuels. Until recently, data was not available for marine fuels and Scope 3 emissions.

Total carbon emissions Scope 1 & 2



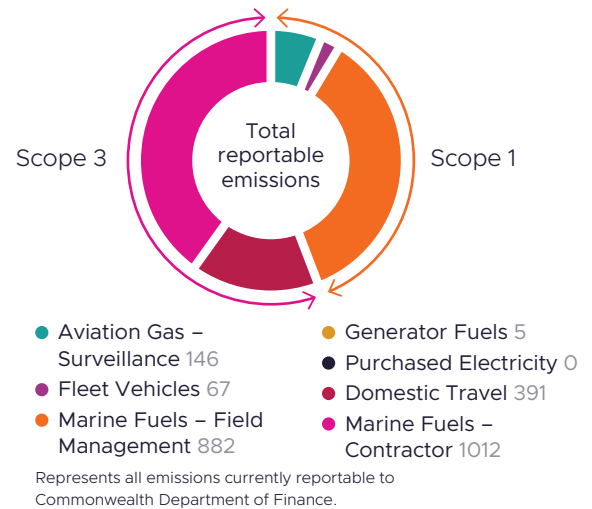
Represents Scope 1 and 2 emissions and 50% share of the Reef Joint Field Management Program marine fuels. 2021 represents 2021-22 financial year and 2022 represents 2022-23 financial year.

Electricity

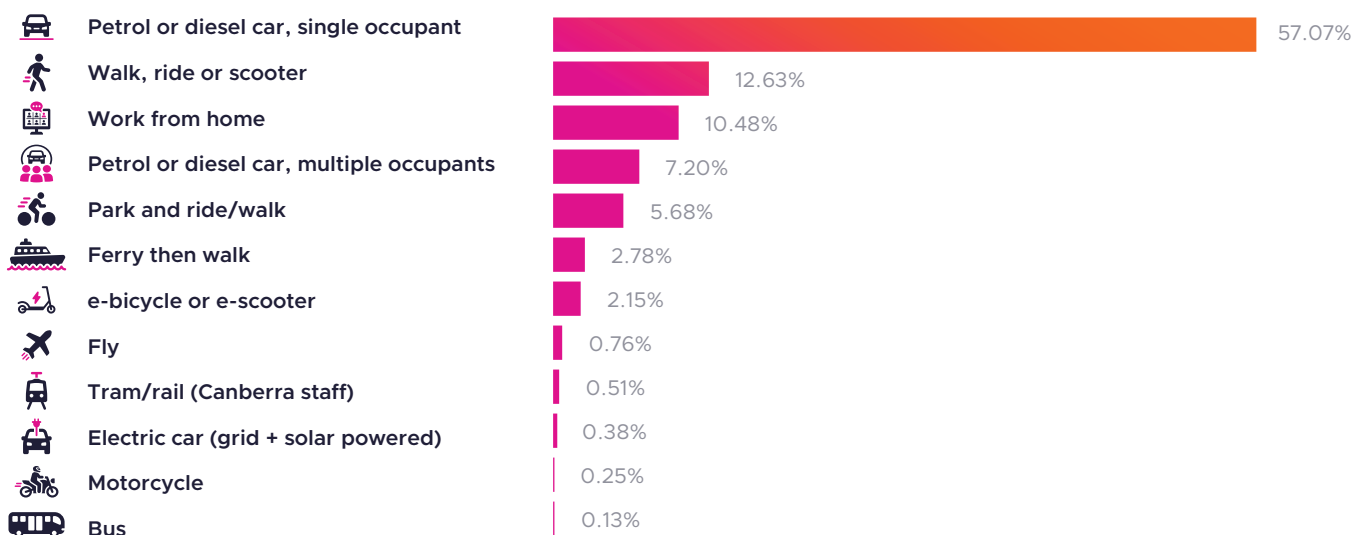


Reduction in emissions due to on-site renewables and GreenPower for all sites fully owned or leased.

Emissions mix by activity in 2022-23 (tonnes CO²-e)



Mode of employee commute in 2021 from employee survey data – estimated 240 tonnes CO²-e per annum



Estimate of annual emissions based on an employee survey where half the total number of staff participated. The annual emissions is an estimate assuming the survey was an accurate representation of the total staff population.

Sustainable construction and buildings

We are committed to ensuring our properties are designed and operated in an efficient manner to align with Circular Economy and Nature Positive principles, with low emissions, low waste to landfill and sympathetic to the local environment.

To achieve this, we will seek and maintain ambitious National Australian Built Environment Rating System (NABERS) for energy efficiency performance and register with Green Building Council of Australia Green Star certification program where applicable to ensure we meet high-performance standards for our buildings.

In a 2018 study we showed that increasing the indoor temperature setpoint by 2 degrees saved 13% annual electricity use at our Aquarium facility and a study found this had no significant impact to building occupants or self-assessed worker productivity¹.

In 2020 we trialled the use of a pico-hydropower system to recover energy used for pumping in a filtration system and found 10% of energy could be recovered and fed back into the building's electricity network².



We installed 260kW of roof-top solar power on our Great Barrier Reef Aquarium facility in phases from 2011. From 2011 to 2024 this system avoided 2869 tonnes of CO²-e emissions and reduced operating costs of the facility.

¹ Thyer et al. 2018. <https://link.springer.com/article/10.1007/s12053-017-9556-x>

² Thyer and White 2023. [https://www.cell.com/heliyon/pdf/S2405-8440\(23\)03916-6.pdf](https://www.cell.com/heliyon/pdf/S2405-8440(23)03916-6.pdf)

Clean energy and clean air

Transition to renewable fuels

Since 2009 we have taken a proactive approach to moving to 100% renewable electricity sources. Now we are focusing on our Scope 1 liquid fuels, and Scope 3 marine and aviation fuels.

We have transitioned 100% of our light passenger fleet vehicles to fully electric vehicles, to minimise use of petrol and diesel that comes from fossil fuels. We will look to transition to low emission options when these become available for our field operations four wheel drive vehicles.

We continue to assess available technologies to transition our marine fleet and aerial surveillance to renewable marine fuels, however this remains our hardest to abate emission source. We will work with our partners to embrace efficiencies and technologies that lower our marine fleet emissions and help decarbonise the Australian shipping and marine vessels sectors.

The Reef Authority will continue to explore the application of technologies to enhance its capability for land, sea, and air-based operations to ensure protection and sustainable use of the Great Barrier Reef. This includes trialling and continuing to implement the use of drones to improve the effectiveness, efficiency, and safety of field operations. As new fit for purpose technologies become available and partnerships are fostered that allow shared capability, the need to use fossil fuels may be reduced.

We will consider our emissions when deciding on the need to travel and consider emissions when selecting our business travel providers.

We have established an electric vehicle charging infrastructure plan to ensure our fleet is well equipped in the transition to electrified road transport.



Innovations and new technologies are helping us to achieve our organisational objectives in the most resource efficient way.

Energy efficiency in field operations

Our Reef Joint Field Management Program operates in partnership with the Queensland Department of Environment, Science and Innovation through the Queensland Parks and Wildlife Service. Marine vessels are operated throughout the Great Barrier Reef Marine Park to protect the Reef and respond to emerging threats within the Great Barrier Reef World Heritage Area.

To ensure efficient fuel use, new large marine vessels will incorporate high efficiency hull designs to provide excellent multi-tasking capability and sea-keeping characteristics.

The vessels are designed and operated to reduce greenhouse gas emissions, minimise waste and reduce use of chemicals:

- New vessels are designed to be retrofitted with contemporary propulsion and power systems as new low emissions technologies become available.
- Stringent emission standards (EPA Tier 3) for engines on our large vessels reduce greenhouse gas emissions.
- Grade A sewage treatment systems installed on our long-range vessels.
- Optimised waste management plan.
- Optimised cruising speed for all vessels to the most efficient speeds.
- Utilising the 4 stroke outboard technologies to reduce risk of oil release and emissions.
- All vessels above 8m have solar panels to reduce fuel burn and shore-power inputs.
- Silicone type underwater coatings to reduce fuel burn and minimise use of antifouling chemicals.
- Aluminium finish eliminating need for paint recoating over life of vessel.
- Vessel birthing that eliminates the need for antifouling and maintains hull streamlining.
- 5-star energy rated domestic appliances.
- Low solar heat gain glazing to minimise energy for air-conditioning.
- High efficiency lighting to reduce power consumption and heat loads on air-conditioning.

Our new patrol vessel: Barcoo

- Uses **composite construction** with recycled plastic
- Will avoid **115 tonnes** CO₂-e over the life of the vessel
- The composite construction has **85% less** embodied energy



Circular Economy

Reducing resources and waste to landfill

We are taking direct action to reduce textile waste.

The textiles industry has been identified as having a high risk for modern slavery, contributing to high volumes of waste to landfill and ocean microplastics. Ocean microplastics can be released when synthetic clothing is washed.

Where possible:

- We are selecting corporate clothing products that are made from 100% natural and sustainable fabric that have options for the end of life of the product that reduce impacts to the environment.
- We are choosing suppliers who demonstrate that social risks are managed in their supply chains.
- We are returning the organic material waste from the uniform manufacturing process to be composted into soil.

Our focus will be on product designs that use more sustainable alternatives to plastic where possible and consider circularity for the whole lifecycle of the product to make it easier to dismantle, re-purpose, re-design, re-use and recycle materials into new products.

Our approach and Sustainable Procurement Framework aligns with the principles of the Commonwealth Sustainable Procurement Advocacy and Resource Centre's *Sustainable Procurement Guide*.



Where it is not feasible to use 100% natural fabrics, we are choosing high recycled content and products that have lower manufacturing emissions.

For our head office accommodation, we have specified a carpet product made from 100% recycled content and chose supply chains with lower emissions and that minimise waste to landfill when the product reaches its end of life. The carpet tiles are laid with a glue-less system to avoid toxic adhesives.

Nature Positive

A regenerative approach

Nature Positive is a term used to describe circumstances where nature – species and ecosystems – is being repaired and is regenerating rather than being in decline.

An example of this is the Reef Authority Crown-of-thorns Starfish Control Program which aims to allow coral reefs to regenerate by removing a stressor from the system.

Our Crown-of-thorns Starfish Control Program marine service providers will be net zero in their service delivery initially by using carbon offsets that have demonstrated biodiversity co-benefits and by adopting low emission technologies as they become available.

Through our procurement and Reef management activities we actively pursue options that have co-benefits for nature, and we will choose suppliers who support habitats and nature.



In 2024 we worked with a supplier to compost the excess textiles from the manufacture of our 100% natural fabric corporate uniforms. This soil can then be re-used in agriculture.

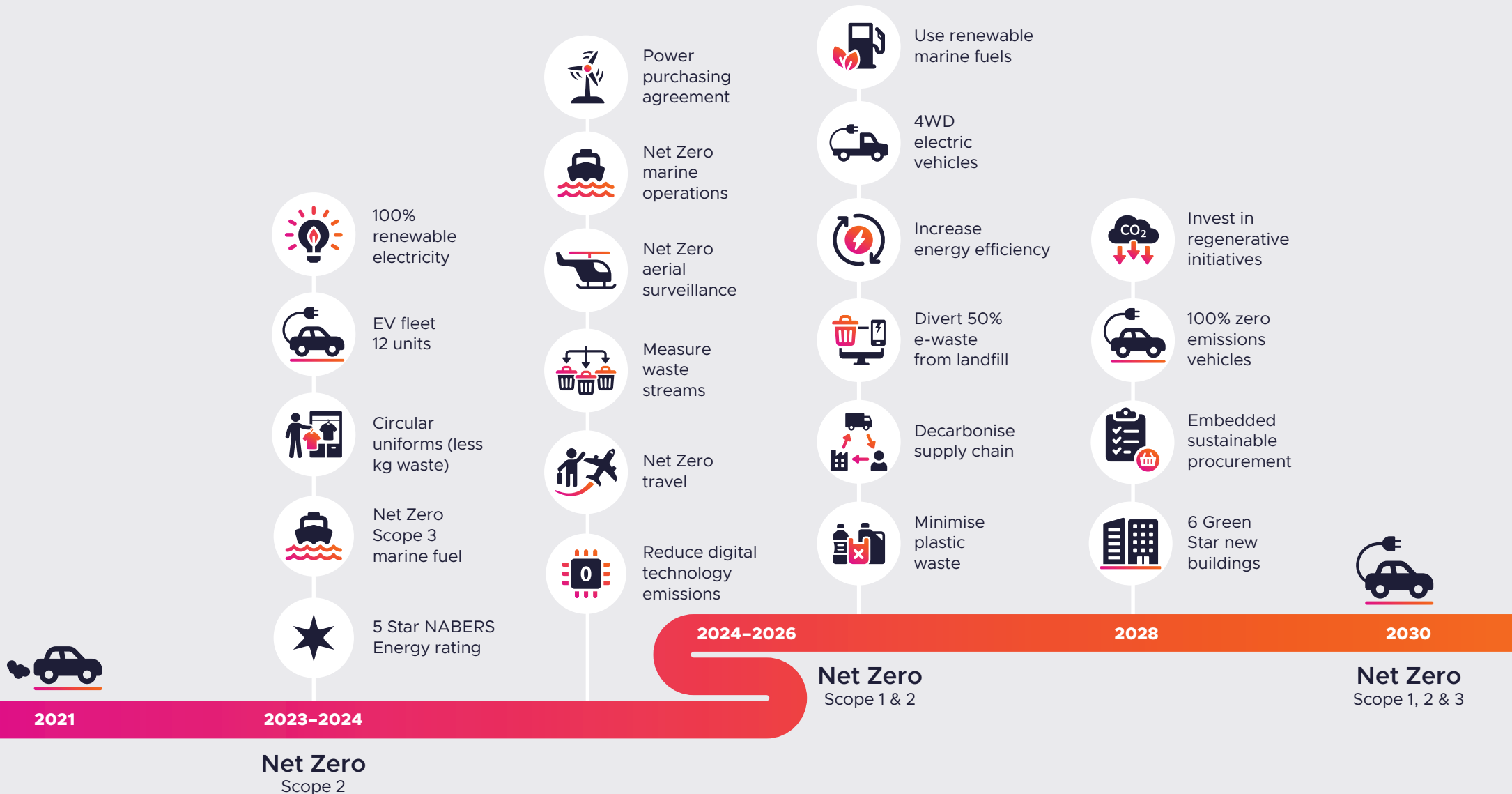


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Our annual targets: tracking and measuring performance

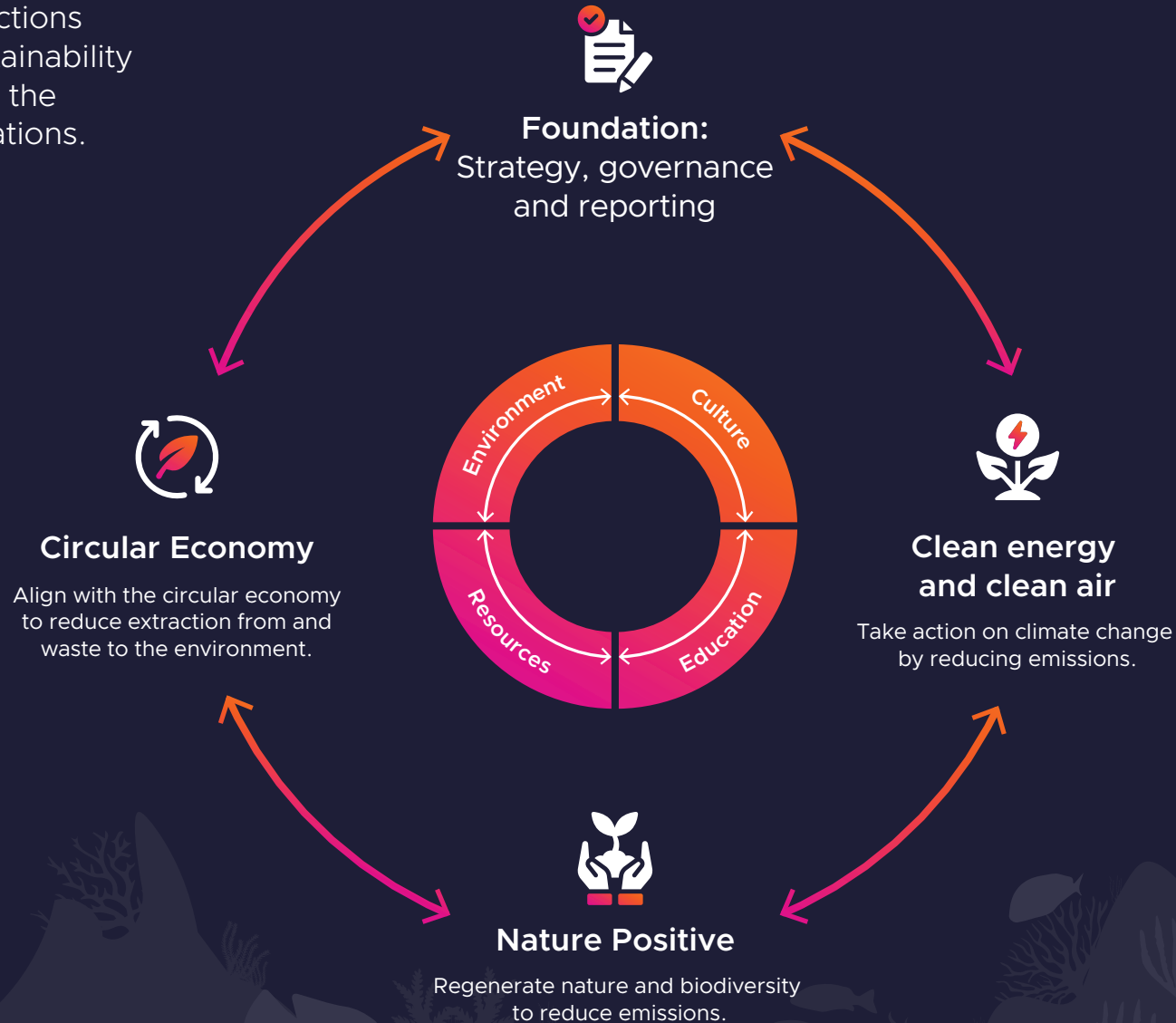
Focus area	Top targets	Measure	Target date
Foundation: Strategy, Governance and Reporting			
Sustainability Strategy	Revise Sustainability Strategy every 2 years with ambitious targets	Transparent Sustainability Strategy available to all stakeholders	Every 2 years
Sustainability budget	Maintain sustainability budget & invest annually in sustainability	Track budget and spending on sustainability to meet targets	Annually
Sustainable procurement policy	Establish a Sustainable Procurement Framework and embed sustainable procurement practices	Sustainable Procurement Framework is available and resources dedicated to support its implementation	Annually
Building sustainability certification	Head office: minimum 5 star NABERS Energy Rating Register for Green Star fitout	Leased space that meets set targets	Ongoing till 2030
Environmental performance reporting	Report against targets annually	Annual report content complies with Commonwealth Climate Disclosure and Net Zero in Government Operations reporting	Annually
Capability	Increase staff sustainability capability and engagement Partners for change	Establish mechanism for staff to contribute to goals Percentage to complete staff sustainability training	Annually
Clean Energy and Clean Air			
Renewable electricity	Maintain 100% renewable electricity from on-site renewables, Power Purchasing Agreement or GreenPower	Percentage of electricity from renewable sources for wholly owned or leased properties	Annually
Zero emissions vehicles	100% of light passenger fleet is zero emissions	Percentage of vehicles that are zero emissions	June 2024
	100% road vehicles zero emissions		June 2030
Electric vehicle charging	Establish Electric Vehicle Charging Plan	Electric Vehicle Charging Plan is implemented and infrastructure is available to support electric vehicles	Ongoing till 2030
Marine vessels	Emission Reduction Plan & Carbon Offsets for hard to abate emissions	Percentage emissions from marine vessel fleet Percentage of carbon offsets	Annually
Circular Economy			
Waste Management Plan	Establish a Waste Management Plan with a path to reduce waste to landfill	Waste Management Plan in effect	2024
Waste tracking	Establish a system to track waste	Reliable waste tracking reported annually	Annually
Circular procurement	Embed Circularity requirements in procurement of all goods	Track use of Circularity requirements in procurements	Annually
Recycled content	Avoid plastic where possible but when unavoidable use recycled content for plastics when available	Percentage recycled content in plastic products	Ongoing
Nature Positive			
Contribute to a healthy working environment	Adopt new ways of office working	Nature Positive elements incorporated into the head office fitout	2023 - 2025
Carbon Offsets	Use carbon offsets with Nature Positive co-benefits	Number of carbon offsets with co-benefits	Annually
Nature Positive initiative	Implement biodiversity co-benefits into existing programs	Incorporate regenerative elements into initiatives that align with Nature Positive principles	Annually

Net zero and sustainability roadmap



Future focus

Our wholistic approach recognises the connections between our four sustainability focus areas to protect the Reef for future generations.





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