



Towards net zero: reviewing our net zero roadmap

We are developing a new net zero roadmap informed by the latest science and best practices. By embedding climate and nature science in our solutions and system thinking across our operations, we aim to enhance our approach to net zero in a way that reflects the impactful research we deliver for the nation.

As the national science agency, we deliver the science Australians need for the nation they want – productive, sustainable, healthy and secure. Sustainability is at the core of our science and our vision to improve the lives of every Australian.

The challenge

Climate change is a defining challenge of our time. The science and research activities we undertake are our greatest contribution to solve many of the challenges we face, including technologies and solutions to help the nation deliver on the Paris Agreement commitments as we transition to a low carbon economy. However, we recognise that our activities have an impact on the triple planetary crisis (climate change, biodiversity loss and pollution) and we are committed to bridging the gap between our excellent science and the sustainability of our operations, as explained in our Board-approved [Sustainability Strategy 2020–2030](#).

Our facilities and infrastructure are essential to the delivery of our research. CSIRO has existed for over 100 years, and our property portfolio is extensive, diverse and ageing. We aim to ensure our portfolio continues to meet current and future needs, while reducing the environmental impact of our facilities and activities over time and ensuring the resilience of our business.

For more details about the positive impacts of our research, see our report [The Value of CSIRO 2024](#) and [The CSIRO Book](#).

Strengthening data integrity for greenhouse gas (GHG) accounting

In 2023–24, we commenced a significant review of our data sources to identify priority areas for improving the collection, validation, and management of GHG emissions data. As part of this review, in 2024–25 we reclassified several emissions sources to improve the accuracy and consistency of our GHG inventory. While we have made some progress, further work is needed to enhance the completeness, accuracy, and auditability of our data, particularly in relation to fugitive emissions and Scope 3 emissions.¹

To strengthen our data integrity and support accurate and reliable reporting, we are also modernising our data management systems. In 2024–25, we secured a new sustainability data management system to uplift organisational capabilities, with a focus on automating data collection to minimise errors and improve accuracy. These improvements are being cascaded across the organisation through updated processes and governance structures.

Scope 3 emissions remain a significant challenge where supply chain data remains limited. Recent improvements in data identification have allowed us to begin collecting actual data for certain upstream Scope 3 categories. In 2025–26, we plan to undertake a review of our Scope 3 emissions profile, aligned with the GHG Corporate Value Chain (Scope 3) Accounting and Reporting Standard. This will guide a more targeted data collection strategy, enable meaningful engagement across our value chain, and focus our efforts on reducing material emissions sources.

For more details about our GHG data, see our Sustainability Compliance Report within our [Annual Report 2024–25](#).

¹ **Scope 1 emissions** cover direct emissions resulting from the consumption of energy sources such as gas and fuels on CSIRO owned or controlled sites. **Scope 2 emissions** cover indirect emissions from the generation of electricity, steam, heating and cooling purchased by CSIRO. **Scope 3 emissions** cover indirect emissions as a result of activities that occur across CSIRO's value chain (other than scope 2 emissions).

Reviewing our current net zero roadmap and targets

We continue to be committed to achieving net zero by 2050. We have interim targets to achieve net zero emissions for scope 1 and 2 emissions by 2030², based on our 2018–19 emission baseline³ and to achieve 100% renewable electricity by 2030.

The organisational boundary for our targets pertains to CSIRO's operations that are within our operational control, including research units, enterprise units and subsidiaries. The following GHGs are included in the targets: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃)⁴. Emissions from these gases are aggregated into carbon dioxide equivalents (CO₂e)⁵ using conversion factors called global warming potentials (GWP).

CSIRO set its current net zero emissions targets in 2019–20, adopting the Energy Efficiency in Government Operations Policy (Commonwealth of Australia 2006) (EEGO Policy) as the basis of the reporting boundary for CSIRO's net zero emissions targets. The EEGO Policy has since been superseded by the Net Zero in Government Operations Strategy (Commonwealth of Australia 2023), which uses the operational control approach to set the reporting boundary.

We have reviewed CSIRO's organisational and operational boundaries and continue to work on improving the accuracy and completeness of our data. Given the need to strengthen the integrity of our data, in 2024–25 we took the opportunity to reflect on our progress over the past five years and commenced a review of our net zero roadmap and targets, including conducting a reassessment of opportunities to address residual emissions sources.

While we focus on the development of our new net zero roadmap and targets, the implementation of our current net zero roadmap will continue through:

- property consolidation (to reduce emissions)
- energy efficiency improvements
- electrification of plant and equipment
- expanding/optimising on-site solar generation (including energy storage)
- increasing purchases of renewable energy
- transitioning to a low emission CSIRO vehicle fleet
- identifying opportunities to reduce fugitive emissions.

Resetting our site-specific emissions reduction target

As part of our current net zero roadmap, in 2020 we set a target to achieve net zero scope 1 and 2 emissions by 2025 for our Newcastle site, which is home to our Energy Centre. We reviewed our pathway for Newcastle and identified further opportunities to improve data and previous assumptions. We also conducted a third-party energy audit. The result of the review and the energy audit surfaced the need to recalculate our baseline for emissions as well as an opportunity to implement further greenhouse gas reductions. For these reasons, we have decided not to claim net zero scope 1 and 2 emissions for the Newcastle site in 2025. This approach reflects our commitment to deep decarbonisation and climate integrity, before purchasing offsets to make net-zero claims. We plan to review our organisational targets to ensure that our emissions reduction plans and baselines are robust and auditable, in preparation for our new net zero roadmap. Meanwhile, as stated above, we will continue to implement the current net zero roadmap which, for Newcastle, includes a major project to completely electrify the site and significantly reduce natural gas usage for stationary energy (Scope 1 emissions). Newcastle will continue to serve as our clean energy exemplar site, showcasing solar technologies and demonstrating a pathway to clean energy transition.

For more details on our progress and challenges, see our Sustainability Compliance Report within our [Annual Report 2024–25](#).



2 Consistent with the Australian Public Service (APS) Net Zero 2030 Target, which forms part of Australia's international climate commitments, including Australia's Nationally Determined Contribution under the Paris Agreement. The objective of the current target is to reduce emissions to mitigate further impacts from climate change.

3 The initial baseline may change as additional emissions sources are included in the future. The timeframe for achieving the 2030 net greenhouse gas emissions target is from 1 July 2019 to 30 June 2030.

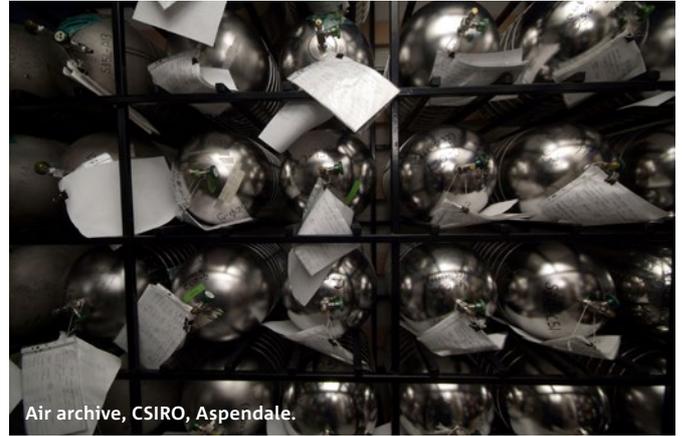
4 As per the APS Emissions Reporting Framework published by the Department of Finance.

5 We use t CO₂e to measure our absolute targets.

Climate risk and opportunity management

To support and drive CSIRO's continued maturity in climate risk and opportunity management, we are reviewing our approach to climate risks and opportunities. In 2023–24, after a gap assessment on our climate risk and opportunity management approach, we prioritised improvements to governance structures related to climate and nature-related risks. Further work will continue to improve and mature our approach to climate risk and opportunity management as we start reporting against the Commonwealth Climate Disclosure Requirements.

For more details on the Commonwealth Climate Disclosure see our Sustainability Compliance Report within our [Annual Report 2024–25](#).



Nature

In developing our new net zero roadmap we will develop plans for both mitigation and adaptation actions. Recognising the deep interconnection between climate and nature, we are also taking action to understand and reduce our impacts on ecosystems and biodiversity. This starts with assessing how our operations influence ecosystems and biodiversity.

Through an innovative research project, our researchers have developed a scientifically rigorous organisational biodiversity assessment approach that estimates our direct impacts on biodiversity over time across our sites. This work is helping us develop a clearer picture of how our operations have impacted local environments and ecosystems. The results provide an important baseline for future decision-making. This work will inform the development of an action plan to help reduce negative impacts on biodiversity across our sites, while guiding us to opportunities for repair and restoration, ensuring a proactive approach to protecting and enhancing natural systems. An essential part of this will be incorporating Traditional Knowledge principles and building strong partnerships with Indigenous communities, recognising their deep connection to Country and continuing role in caring for land, water, and biodiversity since time immemorial.

For more details see our Sustainability Compliance Report within our [Annual Report 2024–25](#) and the [Indigenous Collaboration and Partnerships Report](#).

As Australia's national science agency, CSIRO delivers the science Australians need for the nation they want – productive, sustainable, healthy and secure. CSIRO. Improving the life of every Australian.

Contact us
1300 363 400
csiro.au/contact
csiro.au

For further information
CSIRO Sustainability
sustainability@csiro.au
csiro.au/en/about/strategy/sustainability