



Australian
National
University

Below Zero Program

Delivery Plan (2024-25)

Progress Report (Sep 2023 – Jun 2024)

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Below Zero Delivery Plan (2024-25)

Background

ANU has committed to urgent action to address climate change, with the goal of mitigating climate transition risk for the University. This will ensure that ANU can meet increasing regulation and compliance demands, align and link our operations with research and teaching and increase the attractiveness of the University to students, staff, and partners. This requires changing the way the University operates, in line with the global decarbonisation trajectory.

Below Zero Vision Statement

We have embedded climate change mitigation and adaptation throughout our campus, operations and culture, integrating research and teaching and sharing our learnings to inspire others.

Below Zero Ambition (updated in April 2024)

Interim objective: Carbon neutrality for direct on-campus and energy-related emissions (scopes 1 and 2) via a pilot project in 2025 and from 2026 onwards.

Long-term ambition: To reach below zero emissions from our operations and value-chain (scopes 1, 2 & 3) by 2040.

This delivery plan outlines the goals and key performance indicators (KPIs) required to reach these ambitions.

Delivery of Below Zero Goals (2024-5)

Workstream	Goal	KPI	
Emissions reduction	To reduce the University's emissions in line with Government regulation, ANU climate targets and improved efficiency and effectiveness of operations and services	1.1	Set scope specific, science-based emissions reductions targets.
		1.2	Electrification of ACT buildings, date being confirmed.
		1.3	Electrification of ANU fleet by end of 2030 including pilot of EVs during 2024-25; develop Acton campus charging framework by end of 2025 and implementation thereafter.
		1.4	100% market-based renewable electricity usage across all ANU sites by end of 2024.
		1.5	Maximise solar PV electricity generation across all ANU sites by end of 2030.
		1.6	50% reduction in university travel emissions from 2019 baseline by end of 2025.
		1.7	60% reduction in non-SF6 refrigerants and lab gas emissions from 2019 baseline by end of 2035.
		1.8	Develop mitigation strategy for commuting emissions by Q1 2025.
		1.9	Develop mitigation strategies for other material Scope 3 emissions by end of 2025.
Carbon removal	To remove carbon in line with carbon neutrality target and Principles	2.1	Pilot carbon credit procurement project by end of 2025 and purchase carbon credits for Scope 1 & 2 emissions from 2026 onwards
Environmental sustainability reporting	To meet current and future reporting requirements	3.1	Establish greenhouse gas accounting methods by end of 2025 including Scope 3 mapping by end of 2024.
		3.2	Compliant environmental sustainability reporting aligned with APS / TCFD / AASB climate risk disclosures.
Integration with research and teaching	To align and integrate the program with ANU research, teaching and internship programs, functioning as a living lab, driving innovation and contributing to the employability of graduates	4.1	Provide work-integrated learning opportunities for students.
		4.2	Integrate research expertise into operations.
Community engagement	To create an empowered and knowledgeable community on climate and sustainability action	5.1	Development and implementation of accessible, interactive opportunities for behavioural change.
		5.2	Development and implementation of motivating and inspiring communications and engagement opportunities.
		5.3	Actively participate in and develop forums for discussion for sustainability action with external stakeholders.

Progress against ambitions (Sep 2023 – Jun 2024)

Carbon neutrality for direct on-campus and energy-related emissions

Scopes 1 and 2 via a 2025 pilot and from 2026 onwards

● Green ● 41%



To reach below zero emissions from our operations and value-chain by 2040

Scope 1, Scope 2, and Scope 3

● Amber ● 5%










Progress against goals

To reduce the University's emissions in line with Government regulation, ANU climate targets and improved efficiency and effectiveness of operations and services

● Amber ● 35%




- Set scope specific, science-based emissions reductions targets by end 2025  ● Amber ▲ 26%
- 100% electrification of ACT buildings by 20XX (date TBC)  ● Amber ▲ 41%
- 100% electrification of ACT fleet vehicles by 20XX (date TBC) including pilot of 2024/25  ● Green ▲ 10%
- 100% market-based renewable electricity usage across all ANU sites by 2025  ● Green ▲ 100%
- Maximise solar PV electricity generation across all ANU sites by 2030  ● Green ▲ 7%
- 50% reduction in university travel emissions from 2019 baseline by 2025  ● Green ▲ 66%
- 60% reduction in non-SF6 refrigerants and lab gas emissions from 2019 baseline by 2035 (date TBC)  ● Green ● 5%

To remove carbon in line with ANU climate targets and Principles

● Amber ● 10%

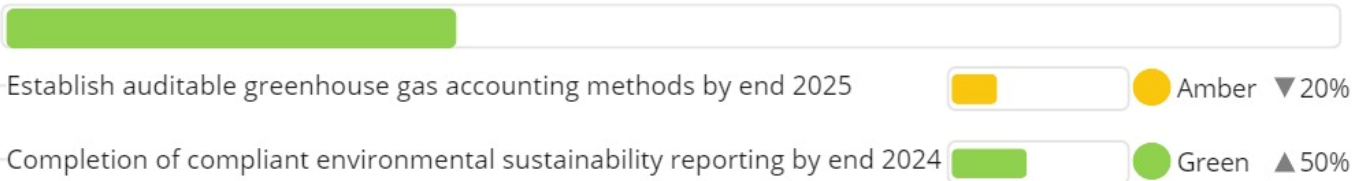


- Development and implementation of a plan for carbon credits and ANU-connected carbon removal by 2025 (TBC)  ● Amber ● 10%

Note: Progress is against the goals and KPIs outlined in the Q2 Delivery Plan, implemented prior to the new ambitions being set by Council in April 2024. The next progress report will report on the updated delivery plan.

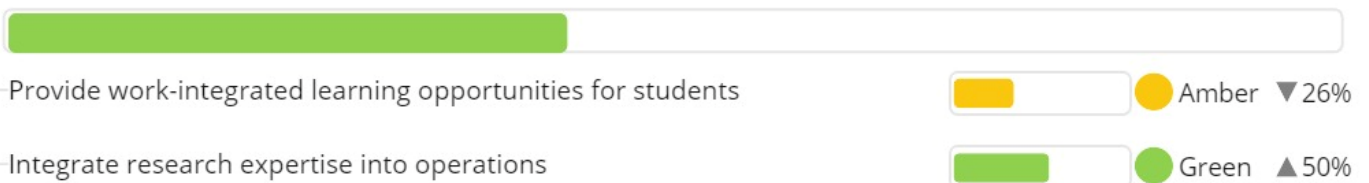
To meet reporting requirements

● Green ● 35%



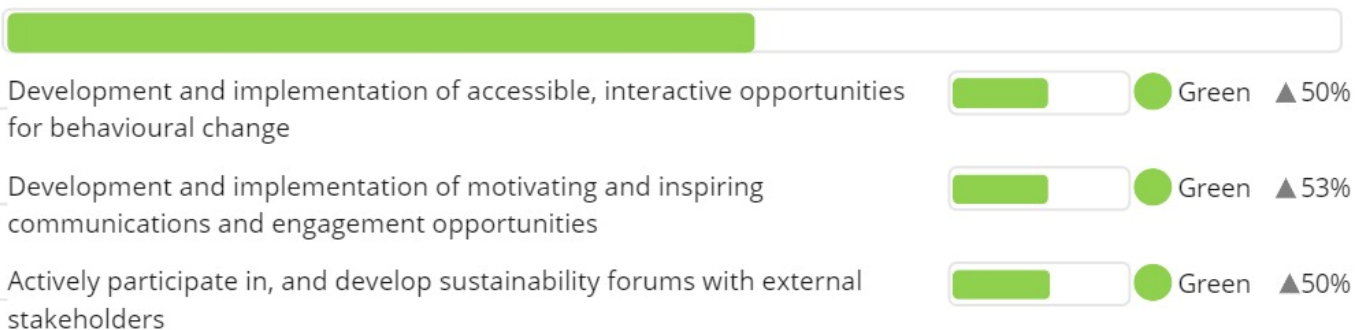
To align and integrate the program with ANU research, teaching and internship programs, functioning as a living lab, driving innovation and contributing to the employability of graduates*

● Green ▲ 38%



To create an empowered and knowledgeable community on climate and sustainability action and build the reputation of ANU*

● Green ▲ 51%



*Progress against these goals is measured on an annual basis

Interpretation

Progress bar



Visual indication of the progress made to date within the context of the timeframes stated in the goal or KPI.

Goal status

- Red Serious issues and recovery plan needed
- Amber Some issues being managed and monitored
- Green On track

Status is independent of completion and indicates whether a goal or KPI is on track to be met within the timeframes indicated.

Trajectory

- No change since last report
- ▲ Better since last report
- ▼ Worse since last report

Percentage completed

40%

Indicates the percentage achieved of the goal or KPI. All KPIs are allocated a maximum of 10% for planning. For example, even though no fleet vehicles have been converted, planning is underway, and is therefore 10% complete.

Key achievements

Significant progress has been made on the delivery of program goals over the ten-month period. However, in 2023 the Program signalled that it was facing challenges meeting the targets based on the resources available. In February 2024, Council endorsed a strategic reset of the program. At the April meeting, Council resolved that an updated timeline for achieving below zero emissions be communicated to the community.

Goal 1 - Emissions Reduction

Electrification of gas infrastructure

- Four more buildings converted from gas to electric heating, taking the number of electrified buildings to eight, with two more in progress (University House and Drill Hall Gallery).
- A business case for full electrification of the Stromlo campus has been developed and is awaiting endorsement.
- The Program has developed a Discovery Proposal for Decarbonisation of Acton Campus.

University travel emissions reduction

Implementation of travel emissions reduction program is well underway, following the announcement of the 50% University travel emissions reduction goal (by 2025) in October. The Program has:

- Co-developed and launched an app ([Travel Emissions Tracker](#), TET) to provide transparent emissions data (see Figure 1).
- Conducted a survey on travel practices and low carbon travel. Over 400 staff participated, with more than three quarters supporting 50% emissions reduction goal. Staff results showed that 97% of respondents had already taken at least one action in the last year that resulted in reduced travel emissions.
- Engaged ten areas between Schools and Colleges around co-design of emission reduction activities.
- Contributed to procurement of new travel technology and management
- Developed and launched a new Carbon Smart Travel Guide to the ANU community.
- Co-chaired ANU Travel Lab, which conducted a literature review, interviews with other universities and the ANU community to inform decision-making.

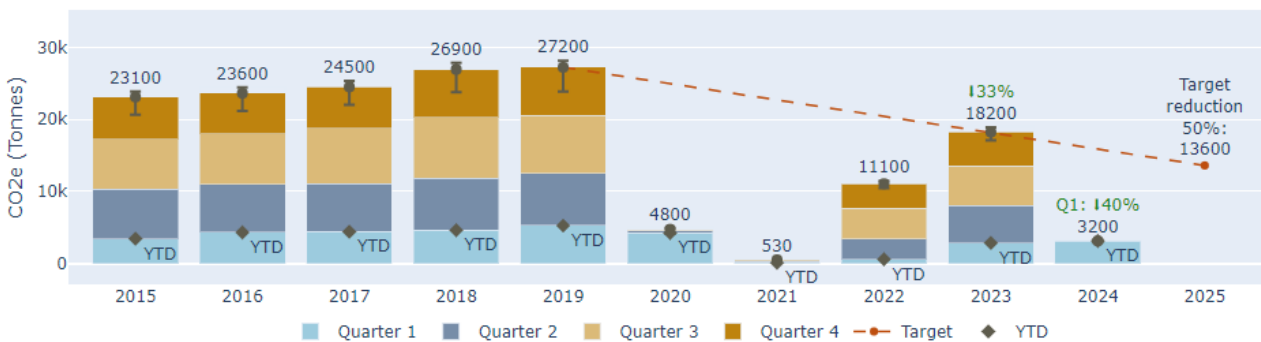


Figure 1 Annual university travel emissions 2015- Q1 2024 demonstrating a 33% (~9000 tonnes) reduction since 2023 from 2019 (baseline year).

Transition to 100% renewable electricity across all ANU sites

- The program contracted a Power Purchase Agreement for renewable electricity outside ACT.

Transition to Electric Vehicles (EVs)

- Development of EV strategy – to be approved in Q3. Development of Acton charging framework is in progress.
- Six public fast chargers installed on Acton Campus using funding from ACT Government. Another ANU site has been awarded funding with four more chargers to be installed later in 2024.

Goal 2 - Carbon removal

- Early market engagement with carbon credit suppliers was completed.
- Academic review and update of ANU Carbon Removal Principles (v2).
- ANU-connected carbon removal approach prioritisation developed and endorsed.
- The program scoped and received initial approval to progress a landscape revegetation project at Kioloa Coastal Campus to design phase.
- Provided support for a research project examining co-benefits in the Australian carbon credit market.

Goal 3 - Environmental sustainability reporting

- 2019-2023 emissions inventory finalised and included in the ANU Annual Report 2023.
- ANU Environmental Sustainability Report 2023 was published - the first for many years.
- Emissions reduction KPI included in the University's 2025 Corporate Plan.
- Progress on materiality and analysis of Scope 3 emissions to develop a pilot 2023 Scope 3 inventory.
- Commenced work on pilot climate change disclosure (CCD) to be published in 2024 Annual Report and completed scoping of requirements for new mandatory reporting (due 2025 Annual Report).

Goal 4 - Integration with research and teaching

- Four internships (College of Business and Economics) were conducted
- Three courses integrated BZ content and provided work-integrated learning opportunities for students in Semester 1, 2024.

Goal 5- Community engagement

- Launched a new community engagement app (One Small Step) aimed at building capacity for climate action across ANU, resulting in 206 registrations since February.
- Developed a new LinkedIn Sustainability courses collection in collaboration with People and Culture.
- Engaged students throughout O-week and regular features in On Campus.
- Developed and presented sustainability related content for ANU manager training and inductions.
- Examples of community engagement stories:
 - [Planning international travel](#) December 2023
 - [Every choice matters; it just takes One Small Step](#) March 2024
 - [Environmental Sustainability Report 2023](#) May 2024
 - [Carbon Smart travelling](#) June 2024

Key issues and mitigations

Electrification of gas infrastructure

- The University's challenging financial situation has led to significant reductions in the capital budget. As a result, some gas boiler conversion projects were put on hold. To ensure business continuity and minimise the risk of boiler failure, F&S developed a plan to extend the useful life of boilers at, or nearing end-of-life over the next four years.
- Given financial constraints, the implementation of the Campus Decarbonisation Master Plan (CDMP) will be slower than initially estimated.
- A discovery proposal has been developed and campus degasification will be included in the Capital Planning process.

University travel emissions

There have been some delays to travel emissions reduction, namely:

- The procurement of new ANU-wide travel technology has been delayed. To mitigate this, the program has developed interim solutions that support travellers to plan options with a lower carbon footprint.
- The co-design and implementation of activities in different areas (College/School) has been slower than anticipated. The team has addressed this by reframing the program around achieving success with a lower carbon footprint.
- An action research program conducted by the ANU Travel Lab (led by BSGIP) was delayed due to difficulties in securing engagement. The scope has now been significantly reduced due to budget cuts.

Carbon removal

- ANU connected carbon removal projects have been delayed due to lack of ANU funding.
- Carbon credit procurement is endorsed and awaiting budget allocation via the Capital Planning process.

Greenhouse Gas Emissions report

As seen in Table 1, the University's greenhouse gas emissions have started to rebound from the Covid-19 pandemic but remain below the 2019 base year. The rebound is mainly driven by travel emissions. Results are presented based on tonnes of Carbon Dioxide Equivalent (tCO₂-e).

Table 1 ANU greenhouse gas emissions inventory 2023

Emission source	Scope 1 tCO ₂ -e	Scope 2 tCO ₂ -e	Scope 3 tCO ₂ -e	Total tCO ₂ -e	% change since 2019
Electricity (Location-Based* Method)	-	73,326	5,394	78,720	
Electricity (Market-Based* Method)	-	7,230	893	8,122	-91
Natural Gas	11,705	-	2,976	14,681	-13
Fleet	335	-	84	418	-15
University travel – Land-based travel and international flights excl. commuting	-	-	16,470	16,470	-35
University travel – Domestic flights	-	-	1,730	1,730	-5
Refrigerants	2,643	-	-	2,643	+7
Waste	-	-	1,304	1,304	-20
Other fuels	41	-	14	55	-33
Total tCO₂-e (location-based)	14,724	73,326	27,971	116,020	
Total tCO₂-e (market-based)	14,724	7,230	23,470	45,423	-68

Note: Table 1 includes both the market-based and location-based accounting methods for electricity. Location-based accounting measures the actual emissions associated with the grid electricity supplying ANU. The market-based method focuses on emissions associated with electricity purchased by ANU including contractual agreements like Renewable Energy Certificates or Greenpower. Domestic flights are reported separately due to APS Net Zero reporting requirements.

The significant reduction in emissions between 2019 and 2020 is due to the ACT government implementing their policy of purchasing 100% renewable electricity for the ACT as well as the impacts of the Covid 19 pandemic.

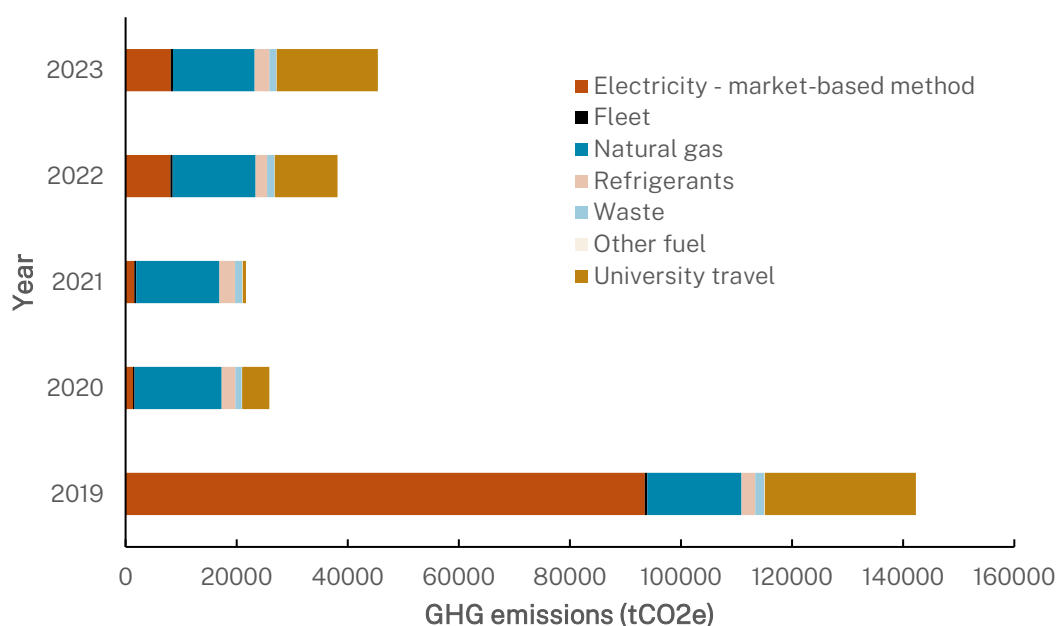


Figure 2 Greenhouse gas emissions (tCO₂e) 2019 – 2023 (market-based accounting method)