



ANU Below Zero Program

Strategic Plan

Purpose

Climate change is causing increasingly devastating impact. Globally, national climate pledges combined with other mitigation measures put the world for a global temperature rise of 2.7°C by the end of the centuryⁱ. This is well above the Paris climate agreement target to limit global warming to 1.5°C above pre-industrial levels.

Reducing greenhouse gas (GHG) emissions to net zero is necessary but no longer sufficient to achieve the Paris target. Along with reducing GHG emissions, we also need to drawdown GHG emissions from the atmosphere and sequester them for the long term.

The Australian National University's leadership and community members are highly supportive of action to be taken and recognise that both organisational change and individual behavioural change are required in equal measure ([ANU Below Zero Initiative Baseline Survey](#)). Aligning our desire for change with an agreed understanding of our goals is the first step; the next step is taking action.

The Below Zero Program is the University's commitment to understand and demonstrate concrete, ambitious and transparent climate action, using the University as a living laboratory. Through the program, we will also build knowledge, frameworks and capacity to support climate action at scale and at pace in Australia, in our region and globally.

In May 2021 the ANU Council announced that we will achieve below zero GHG emissions by 2030 for energy, waste, work travel and direct on-campus greenhouse gas emissions.

New capabilities, along with systemic change in our infrastructure, behaviours, organisational norms, data collection and decision-making processes are required to fully realise the benefits, not only environmental but also social and economic, of ambitious climate action.

As the national university, we have not only a unique responsibility but most importantly, the capability to lead the nation and be at the forefront of leading this transformational change.

Mission

Contribute to global environmental sustainability, through our research, teaching and operations by becoming a greenhouse gas emissions negative university through the ANU Below Zero Programⁱⁱ.

Emissions boundary

The initial emissions boundary for ANU Below Zero includes:

- All direct (Scope 1) emissions
- All energy-related (Scope 2) emissions
- University travel (excludes commuting) and waste (partial Scope 3) emissions

This boundary may be expanded throughout the course of the program to include additional Scope 3 emissions, in line with the University's commitment to deliver and role-model ambitious climate action.

Targets

- Net zero GHG emissions by 2025
- Below zero emissions by 2030

We will meet our targets in the most ethical, sustainable and efficient way by:

- **Reducing** emissions as much as possible within the emissions boundary, first and foremost
- **Offsetting** difficult to abate emissions, only as a last resort, and by using only high-quality, carbon credits on Australian land
- **Removing** more emissions than we produce through carbon removal activities connected to ANU land, research, teaching or partnerships (“ANU-connected carbon removal activities”)

Approach

- To be successful, climate action requires systemic, large scale and integrated infrastructural, institutional and behavioural transformations (See Figure 1).
- We will follow and contribute to improvements in international best practice where they exist. However as many of these practices are emerging we will play a role in establishing and testing best practice models.
- Iteration and experimentation will underpin our approach and we will rapidly upscale and integrate successful outcomes.
- Engaging our community through opportunities for research, teaching and shared learning will be crucial to achieve the ANU goals and build capacity for others.

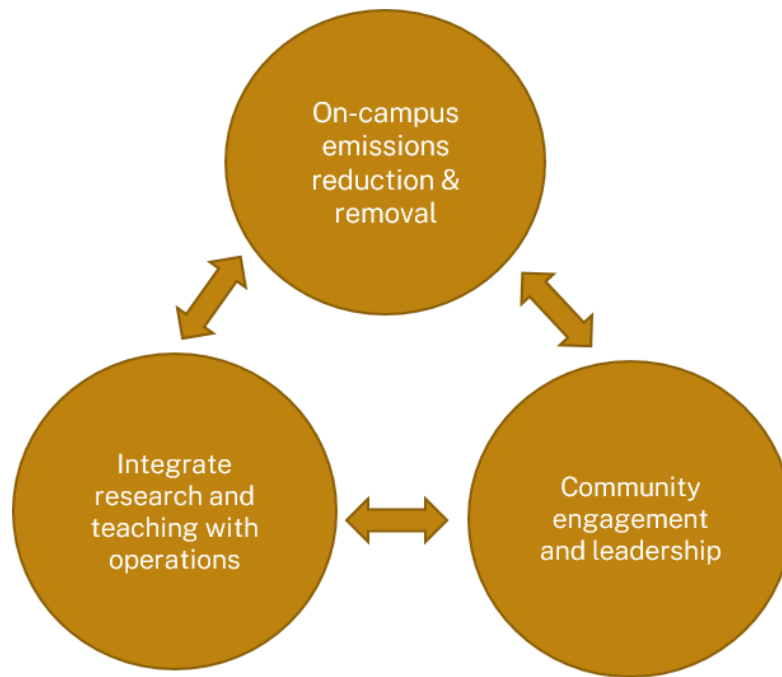


Figure 1: ANU Below Zero three-pronged approach to climate action

Process

Below Zero uses a logic model to capture and simplify the breadth and interconnections of activities required to deliver our commitments.

This logic model builds on and integrates information from scientific literature, benchmarking, community consultation and pilot activities to establish our vision and the six necessary outcomes for ANU to achieve by 2030 to deliver the vision. These outcomes are broken down into tailored group of constitutive outputs, from which the first series of granular actions are identified to be planned, resourced and delivered (see Figure 2).

The logic model further makes explicit the key assumptions underpinning the development of the actions>output>outcome framework, as well as known barriers and risks to progress.

This strategic plan outlines each of the six outcomes and their outputs that are required to achieve success (see [assumptions and risks](#) separately). For further detail on the actions see the [Delivery Program](#).

Below Zero engagement

The Below Zero Program has a small dedicated team. To be successful in sustainably embedding the necessary change at scale and at pace, this team will need to engage with other groups across campus in order to galvanise distributed action. Climate action at the scale and pace proposed by ANU requires more than a program, it requires creating a movement within our community. The necessary engagement will take place on three different levels.

Led by Below Zero – Actions that the Below Zero team will lead and is accountable for delivering.

Partnership with Below Zero – Actions that Below Zero will conduct in partnerships with Divisions, Colleges and other local areas, under a joint accountability and joint resourcing model.

Influenced by Below Zero – Actions that Below Zero will influence by providing support and information to Divisions, Colleges and other local areas to resource and deliver outcomes

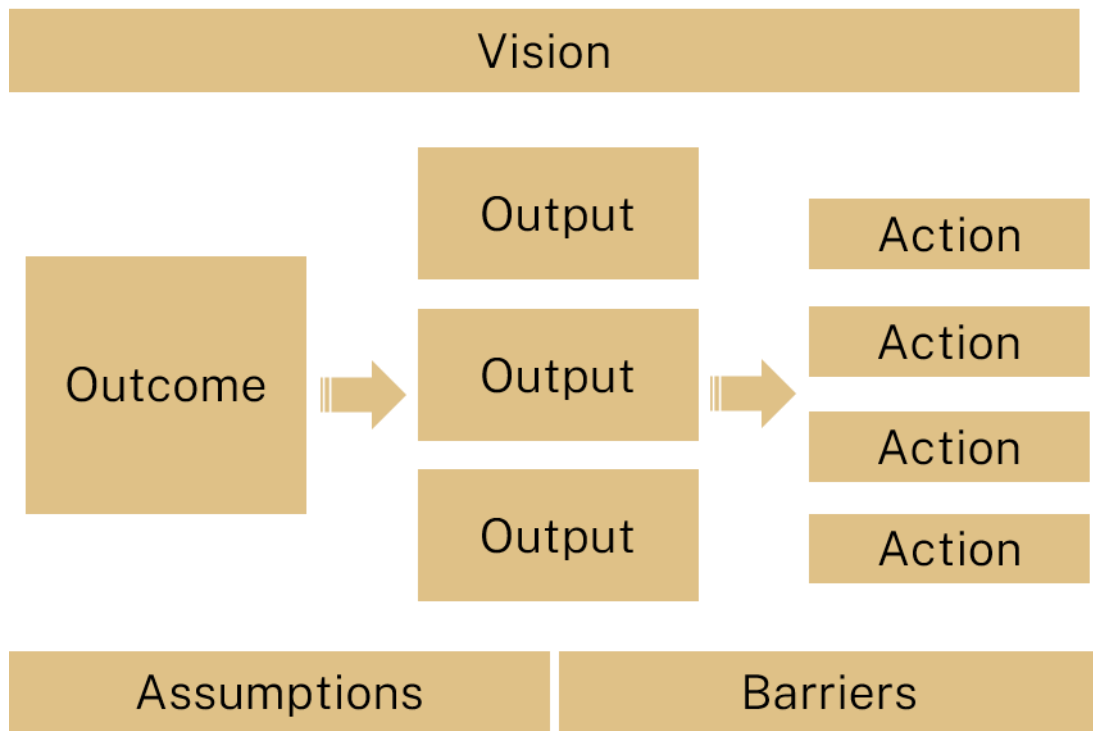


Figure 2: Overview of the logic model underpinning the Below Zero strategic plan

Vision

By 2030 we have:

- Embedded green-house gas reduction and removal in our business operations and culture.
- Powered transformational change by integrating the expertise of our staff students and partners and in turn, creating capability to drive at scale and at pace climate action outside of ANU.
- Shared our learnings, contributed to the national and global climate action agenda and inspired others to follow our lead.

Outcomes for 2030

People

A climate-literate and climate-capable culture throughout the University, where transparency and achieving climate and sustainability goals are drivers of success across the organisation and for individuals.

ANU institutional action is necessary but not sufficient for the Below Zero commitments to be met and sustained into the foreseeable future. Mutually supportive institutional, local area and individual leadership and action are necessary to effect and sustain change.

Our staff and students need to be climate-literate to allow them to meaningfully engage in the change program, so that they understand why change is necessary, how it may impact them and how they can be proactive participants.

We need networks of climate capable staff and students to build capacity to design, develop and implement many of the proposed actions or apply them to their own context.ⁱⁱⁱ

Transparency is required to ensure that we can accurately measure our progress towards our targets.

Environment

An interconnected natural, built and digital environment that demonstrates, enables and encourages climate-positive decisions and behaviours.

The ANU campuses, systems and online presence are windows into our actual collective values and priorities. They must consistently and legibly align with our commitment and narrative for those to be credible in the public eye.

As individuals and groups, we inhabit a range of ANU environments and systems that enable (or discourage) particular behaviours and ways of thinking. Outcome 1 (People) cannot be achieved without consistent positive reinforcement and enablement from our environments.

Leadership

Demonstrated leadership through establishing and identifying catalysing and role-modelling best practice and a systemic approach to ambitious climate action.

The rapidly dwindling timeframes for meaningful climate action mean that leadership is required now to reduce complexity and build capacity.

Leadership and role-modelling are first internal: our Executive and Senior Leaders must ostensibly champion the ANU commitment in everything they do.

We must identify and collaborate with a range of like-minded partners and “co-travellers” to determine and/or continually improve best practice for ambitious climate action.

Achieving and sustaining Below Zero for ANU is a critical first step but not an end goal. We have a unique responsibility to leverage our action by sharing our learnings and building capacity to accelerate climate action by others.

We have unique expertise and resources, as well as access to many national fora. Our advocacy in these spaces must be consistent, legible and sustained to drive societal change.

Net Zero

Achieve net zero for the emissions boundary for 1 Jan-31 Dec 2025 and sustain net zero year on year from 2026-2029 (inclusive).

Achieving net zero for ANU within 5 years of launching the Below Zero program drives us to act at pace and demonstrate the feasibility of ambitious and systemic climate action, especially in terms of reducing emissions.

Maintaining net zero in the following years demonstrates that such rapid climate action can be sustained for extended periods of time.

Establishing a “steady state” of net zero operations enables us to test the robustness of our approach to changes (positive or negative) in our context and activities, study and document the benefits and challenges of net zero operations, and consolidate and share these learnings.

Sustaining net zero operations provides additional time to scale up new capability and capacity to deliver ANU-connected carbon removal activities.

Below Zero

Achieve below zero emissions for the emissions boundary for 1 Jan-31 Dec 2030 using only ANU-connected carbon removal activities.

Committing to achieving below zero for ANU within 5 years of achieving net zero drives us to recommit to ambitious climate action: continue rapid emissions reductions, to minimise the amount of carbon removal needed to meet our annual emissions needs and instead turn our focus to draw down our historical emissions.

Ensuring that there is an ANU connection with all carbon removal activities serving our net and below zero targets not only provides assurance and oversight that ANU carbon removal activities are of the highest quality but also serves as an opportunity for capacity building amongst researchers and students in the emergent field of carbon removal.

Historical emissions

From 2031 onward, sustain below zero emissions for the emissions boundary and draw down on historical emissions using ANU-connected carbon removal activities.

Stabilising the concentrations of greenhouse gases in the atmosphere will require organisations and societies around the world to consistently operate in a GHG-negative way for the foreseeable future.

In line with the ANU commitment to lead in climate action, ANU should establish a timeframe in which we commit to drawdown and sequester historical emissions (since ANU was founded).

It is important for this longer term commitment to be a part of Below Zero, however the specifics of achieving this outcome will be discussed and set at a later date, as new knowledge and experience are gained from achieving outcomes 1-5.



Plan

1. People

A climate-literate and climate-capable culture throughout the University, where transparency and achieving climate and sustainability goals are drivers of success across the organisation and for individuals.

	Output	Below Zero engagement	By 2025	By 2030
1.1	Executives, staff, students and our partners are climate literate and understand the Below Zero program and its importance.	Partnership with OVC, HR, Student Services, DVC-A International Office, Advancement.	Staff training and student education modules and activities are developed and pilot delivery completed. Good climate/ sustainability citizenship is included as an ANU graduate outcome	Training modules and activities are embedded in staff and student induction and development processes.
1.2	Climate-capability is embedded across all functions across the University.	Partnership with all Colleges and Portfolios	Key roles in each College and Portfolio are formally identified as requiring climate capability and performance metrics are set and tracked	All Colleges and Portfolios have sustainability plans in place and demonstrate proactive and continuous performance and improvement
1.3	Reaching climate and sustainability goals is valued and incorporated into success metrics for all Colleges and Portfolios.	Influence all Colleges and Portfolios	All Colleges and Portfolios have formal connections to BZ in their Strategic Plans and	Climate and sustainability performance is explicitly planned and reported in all ANU corporate

			demonstrated performance	and local plans and reports.
1.4	Climate and sustainability goals are incorporated into human resource management policy and practices, including recruitment, position descriptions and the professional development review process.	Partnership with HR	Integration completed for all new ANU leadership recruitments (all senior appointment and general appointments at or above SM1 and Level D). Pilot integration in PDRs and Academic Promotion	Integration completed for all recruitments, PDRs, Academic Promotions and Professional Staff (re)classifications
1.5	Staff and students, as members of the community, have an opportunity to contribute to the goals of Below Zero	Lead	Green Impact is established and participation meets the national average.	Below Zero internships, seed funding and community partnerships are established into “business as usual” ANU operations
1.6	Climate action successes are valued and celebrated	Influence with OVC and ACE	Stories are featured into On Campus. Awards are developed to recognise climate action success	ANU proactively prioritise performance in national and international rankings and awards schemes

2. Environment

An interconnected natural, built and digital environment that enables, encourages and progresses climate-positive decisions and behaviours.

	Output	Below Zero engagement	2025	2030
2.1	Our built and natural environments demonstrate our commitment to climate action	Influence with Facilities and Services and Campus Planning Committee.	Informative signage on ANU campuses. Development of a “living lab” for testing innovations.	Climate-action is an explicit consideration in all ANU campus plans and implemented projects
2.2	Our built and natural environments foster low-carbon decisions and behaviours by our community.	Influence with Facilities and Services.	The Acton campus is host to one pilot mobility node integrated with a thermal hub. There is an established campus-wide management program to divert waste from landfill.	The Acton Campus Masterplan, Below Zero plans, Environmental Management Plan and local area/precinct plans work toward a common goal, and shared actions are prioritised.
2.3	Climate action is highly visible on the ANU digital platforms and in key corporate documents	Influence with OVC and ACE	Below Zero has a presence on ANU website. Below Zero content is included in key corporate documents.	Climate and sustainability performance are an explicit part of all ANU public-facing documents.
2.4	ANU policies, procedures, enterprise systems and processes guide day-to-day climate positive decisions and behaviours	Partnership with Service Divisions	Embedding of Below Zero in priority ANU policies and procedures is backed by integrated updates to corresponding ANU enterprise	Climate action and sustainability are integrated throughout all ANU operational systems and processes

	Output	Below Zero engagement	2025	2030
			systems and processes such as Concur, Travel Management System	

3. Leadership

Demonstrated leadership through establishing and identifying best practice and a systemic approach to deliver transformative change on climate action.

	Output	Below Zero engagement	2025	2030
3.1	ANU has built capability and capacity in staff and students to empower them to be ambassadors and leaders or positive climate action both at, and beyond ANU		Below Zero monitors and reports annually on the progress and impact of “alumni” (staff or students) of the program	ANU is publicly recognised as a primary source of expertise and talent in Australia for climate action via performance on relevant rankings and awards, media mentions, and employability metrics
3.2	ANU has demonstrated leadership on climate action by providing information and sharing experiences with other organisations to help them to set and reach targets	Partnership with ACE	ANU has released and publicised a foundational “building blocks” for achieving net zero	Below Zero has released and actively publicised an integrated series of building blocks for achieving and sustaining net zero operations
3.4	ANU practically demonstrates the financial co-benefits of ambitious climate action by measuring and reinvesting savings and income into the Program to sustain and accelerate action.	Lead	All net operational savings and income streams delivered by Below Zero are reinvested in the Program	ANU transparently publishes sources of funding (both internal and external) and spend on Below Zero as part of our annual report
3.6	ANU has demonstrated leadership on climate action by engaging with co-travellers to contribute to corporate, policy and community climate action.	Lead	Below Zero delivers an “ANU-driven” program of transformation – one that is designed	ANU is a proven leader in setting and growing successful cross-sectoral communities of practice on climate action in the ACT, Australia and the world

	Output	Below Zero engagement	2025	2030
			and led by ANU in partnership with others	
3.7	ANU has influenced and encouraged transformational changes by demonstrating the value of embedding climate action in organisational and business processes.	Influence	Annual community attitudinal surveys show year on year improvement in awareness and support for Below Zero	Below Zero encourages ANU research to find relationships between ambitious climate action and corporate performance

4. Net Zero

Achieve net zero for the emissions boundary for 1 Jan-31 Dec 2025 and sustain net zero year on year from 2026-2029 (inclusive).

	Output	Below Zero engagement	2025	2030
4.1	We use a recognised accreditation program for our carbon accounting framework	Lead	ANU carbon accounting is transparent and third-party verified	Embedded and continual improvement
4.2	We have improved our monitoring of Scope 3 emissions outside of the Below Zero Emissions Boundary	Lead	We have estimated emissions from commuter transport, and audited current contracts	We have mapped and estimated other Scope 3 emissions.
4.3	We have improved our energy efficiency	Partnership with Facilities and Services	10% reduction in energy consumption per m2 net lettable area (NLA) from 2019	20% reduction in energy consumption per m2 net lettable area (NLA) from 2019
4.4	We have electrified our campuses including buildings and vehicles	Partnership with Facilities and Services	35% of natural gas use is eliminated on Acton campus 100% of the Acton campus vehicle fleet is electrified	The ANU is 90% electrified
4.5	The ANU Acton Campus is a dynamic, distributed, resilient energy network participating in the electricity market	Partnership with BSGIP and Facilities and Services	A pilot smart hub is operating The EV fleet is integrated with the grid Demand management has commenced	The ANU Acton campus operates as a microgrid

	Output	Below Zero engagement	2025	2030
4.6	Our campuses are powered by renewable energy	Partnership with Facilities and Services	All non-ACT campuses use 100% renewable energy 2% of total electrical consumption at Acton Campus is contributed by onsite renewables	Acton Campus is powered using 100% renewable electricity 10% of total electrical consumption at Acton Campus is contributed by onsite renewables All non-ACT campuses use 100% renewable electricity, from onsite generation where possible
4.7	We have achieved an equitable reduction of business travel GHG emissions from 2019 baseline	Lead	Implemented the Travel Change Program Targets prosecuted by WG2	Has met the agreed on* reduction target *Proposed: 30% reduction from 2019 baseline. Currently under review
4.8	Very difficult to abate emissions are offset via high-quality carbon credits	Lead	First year for carbon credit retirement	All ANU offsets are from ANU-connected credits
4.9	We have implemented integrated processes and systems to operationalise the ANU "Polluter pays" principle	Lead	Pilot implementation in 2024 and incorporate in planning and budgeting from 2025	Part of core ANU functions and continuously improved.

5. Below Zero

Achieve below zero emissions for the emissions boundary for 1 Jan-31 Dec 2030 using ANU-connected carbon removal activities.

	Outputs	Below Zero engagement	2025	2030
5.1	Marginal emissions are offset or inset with ANU-connected carbon removal activities	Lead	First strategic suite of ANU-connected Carbon removal activities are being developed and deployment is planned	ANU-connected carbon removal activities demonstrate capacity to sustain Below Zero and scaling up potential to accelerate the drawdown of historical emissions and/or broadening of ANU Emission Boundaries.

6. Historical emissions

From 2031 sustain below zero emissions and draw down on historical emissions using ANU-connected offsets.

	Outputs	Below Zero engagement	2025	2030
6.1	Agreed negative emissions trajectory and management	Lead	Inventory of total ANU historical emissions for the period 1946-2019 (estimated where needed) is completed in line with ANU carbon accounting frameworks	ANU Council re-commits to drawing down ANU historical emissions within an agreed period.



Endnotes

ⁱ **United Nations Environment Program.** Emissions Gap Report 2021 - The Heat is On: A world of climate promises not yet delivered – published October 2021 - [link](#)

ⁱⁱ **Australian National University.** ANU by 2025 Strategic Plan – published 2021 - [link](#)

ⁱⁱⁱ ANU School of Cybernetics. Re/defining Leadership in the 21st century: the view from cybernetics – published August 2022 - [link](#)