

Zeroing in

IMPACT REPORT
2017-18



Co-founded by Monash University and The Myer Foundation and working within Monash Sustainable Development Institute

What does ClimateWorks do?

ClimateWorks are leading, independent analysis and engagement experts, bridging the gap between research and action to catalyse reductions in greenhouse gas emissions to net zero for Australia and our region, in the fastest, most cost-effective way possible.

SINCE 2009

ClimateWorks Australia was co-founded in 2009 by The Myer Foundation and Monash University and works within Monash Sustainable Development Institute (MSDI). Since launch, we've made significant progress, engaging key decision makers from all tiers and sides of politics and business.

Our small, highly specialised team of business and policy analysts and engagement experts applies a collaborative approach, using robust research and analysis, along with clear and targeted engagement to look for innovative emissions reduction opportunities that deliver greatest impact. We then address roadblocks, create an evidence-based case for action and build capacity to implement solutions at scale.

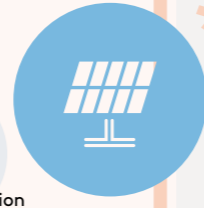
This, combined with philanthropic funding and university ties, has earned us an outstanding reputation as a genuine and impartial adviser.

As part of MSDI, we are able to bring together leading researchers to focus on large-scale, interdisciplinary projects addressing global issues addressed by the United Nations' 17 Sustainable Development Goals. ClimateWorks also benefits from strong relationships with an international network of affiliated organisations that support effective policies, financing and action for greenhouse gas emissions reductions.



1. USE ENERGY MORE EFFICIENTLY

Choose assets and equipment that use less energy to get more out of the energy we do use - in areas such as buildings, industry, transport and infrastructure.



2. PRODUCE LOW CARBON ELECTRICITY

Transition to zero carbon electricity sources such as solar, wind and geothermal.



3. SWITCH TO ELECTRICITY AND CLEAN FUELS

Switch every energy-using activity we possibly can to electricity (powered by clean energy), and everything else to low emissions alternatives (e.g. coal and oil to biofuels).



4. NON ENERGY EMISSIONS

These are reduced through process improvements and carbon capture and storage (CCS) in Industry and we offset the rest through bio-sequestration.

Net zero emissions remains the goal, and our analysis applies a 4 step approach to get there. How quickly Australia and our region achieves this, is the next challenge.

Directly supported by our analysis, SA, VIC and QLD State Governments set net zero emissions by 2050 targets, while the Federal Government used our analysis to inform Australia's NDC for the Paris Climate Agreement.

Monash University has committed \$135 million to get to net zero by 2030 across all Aussie campuses. We worked with them to jointly develop their net zero emissions strategy then launch the Monash Net Zero Initiative - a plan so big it won a global UN 2018 'Momentum for Change' Award.

The CEO of a major global funder called our tailored long-term low emissions development guide for Pacific Island countries "...the best approach I've seen to long term planning to date."

Business leaders now call on us to develop climate risk scenarios for their work. Two of Australia's big four banks commissioned our analysis to develop business strategies in line with the net zero emissions goal, and improved policies as a result (and Westpac also subsequently said "no" to funding Adani).

"I AND THE FOUNDATION COUNT CLIMATEWORKS AS ALMOST CERTAINLY OUR MOST SUCCESSFUL GRANT OVER 60 YEARS OF WORK, AND I REALLY CAN'T STRESS THAT HIGHLY ENOUGH."

- MARTYN MYER
PRESIDENT, THE MYER FOUNDATION



HOW WE WORK

OUR FRAMES OF REFERENCE

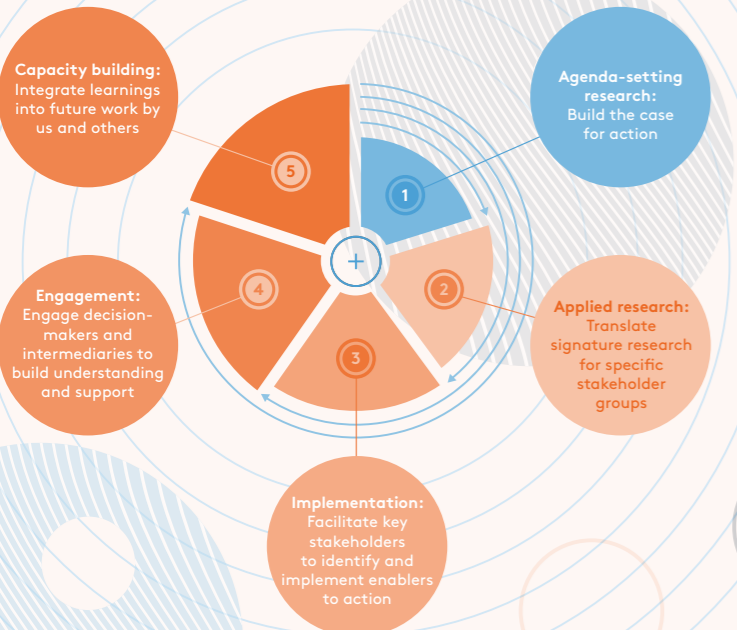
THE BLUEPRINT

OUR IMPACT

WHERE TO NEXT?

WE BRING EVIDENCE TO LIFE

Our end-to-end approach encompasses analysis, engagement and capacity building. This 'cycle of change' underpins our program design and drives our work.



NET ZERO EMISSIONS

To avoid the most serious impacts of climate change, scientists have estimated a physical limit on the amount of greenhouse gases (GHG) that can be released into the atmosphere before a 1.5°C or 2°C average temperature increase is breached. In other words, we need to put the carbon handbrake on.

We do this by reducing the volume of GHG emissions that human activity releases into the atmosphere, until our total output is no greater than the emissions we remove through activities like planting carbon forests, reducing deforestation and using technologies like carbon capture and storage.

$$\text{So no more goes out than goes in} = \text{net zero emissions}$$

A 2014 report by ClimateWorks and Australian National University (ANU) mapped a 4 step plan showing how Australia can transition from one of the world's most emissions intensive economies to net zero emissions in 2050, while GDP keeps growing. It was part of the global Deep Decarbonization Pathways Project (DDPP) representing 15 countries responsible for over 70% of global emissions.

PARIS AGREEMENT

The UN Paris Climate Agreement saw 179 countries commit to keeping global temperature rise to well below 2°C, aiming for 1.5°C. For developed countries, this translates to net zero emissions by mid century.

Further, a 2018 special report by the Intergovernmental Panel on Climate Change (IPCC) tells us that a more ambitious (and far less damaging) 1.5°C will be challenging but not impossible, and requires global carbon neutrality by 2047.

SUSTAINABLE DEVELOPMENT GOALS

ClimateWorks Australia is part of Monash Sustainable Development Institute (MSDI) - a leading interdisciplinary research and education institute pursuing real solutions to the United Nations' 17 Sustainable Development Goals (SDGs).

Our work focuses on SDG 13 - Climate Action, but efforts towards achieving this will impact other SDGs.

OVER 80% OF AUSTRALIA'S EMISSIONS ARE NOW COVERED BY THE NET ZERO IN 2050 TARGET.

Climateworks' analysis directly informed the net zero targets of jurisdictions covering 56% of Australia's emissions.

We helped establish the national Electric Vehicle Council.

We helped secure industry and regulator support for the first upgrade to building code energy efficiency standards this decade.

Our research is heavily cited in Australia's first National Energy Productivity Plan.

Our work has earned awards including the 2009 Banksia Award, 2012 Eureka Prize, 2017 Australian Philanthropy Awards - Best Large Grant, 2017 UNAA Excellence in Climate Research Award, and our CEO Anna Skarbek was a finalist in 2014 Telstra's Women in Business Excellence Awards.

WE'VE HELPED GOVERNMENTS, BUSINESSES AND INVESTORS TO MAKE COMMITMENTS AND MOMENTUM IS BUILDING.

BUT WE ARE AT A CRITICAL JUNCTION:

NOW THE FOCUS IS ON IMPLEMENTATION AS WE SUPPORT THESE ACTORS TO FINISH THE TASK AND IMPLEMENT THE POLICIES AND PRACTICES THAT WILL GET US ALL TO NET ZERO EMISSIONS.



Welcome to your impact report

Please enjoy and share this summary of ClimateWorks' key impacts over 2017 and 2018.

Our team worked incredibly hard through the year, zeroing in on the net zero goal, but I've called this **your** impact report because these are shared successes: ClimateWorks' impacts are only possible because wonderful funders back us, because we collaborate with outstanding leaders across both public and private sectors and because we enjoy invaluable support from Monash and MSDI.

Thank you each and every one of you, for your commitment to this urgent work to address the climate challenge.

A final note: This year's report has been designed for dual purposes. We've reported our impacts on this side, but on the reverse - because so many people keep asking - we've created a wall poster to explain what we do and how we do it all. Enjoy!

- Anna Skarbek
CEO, ClimateWorks Australia

This year we helped advance the national building code...

BUILDINGS

Working with the Australian Sustainable Built Environment Council (ASBEC) we supported building industry leaders to develop an evidence-based pathway for stronger energy performance targets in the National Construction Code.

The Building Code Energy Performance Trajectory project this year delivered two key reports: **The Bottom Line - Household impacts of delaying improved energy requirements in the Building Code** which focused on opportunities to improve the energy performance of residential buildings in the short-term; and the final report **Built to Perform - An industry led pathway to a zero carbon ready building code.**

This showed that setting stronger energy standards for new buildings in the Code could, between now and 2050, reduce energy bills by up to \$29 billion, cut energy network costs by up to \$13 billion and deliver at least 78 million tonnes of cumulative emissions savings.

Thus far, this work has directly contributed to a commitment by building ministers to reassess the energy requirements for residential buildings, in the next review of the National Construction Code.

...and we exposed Australia's emissions progress by sector

POLICY

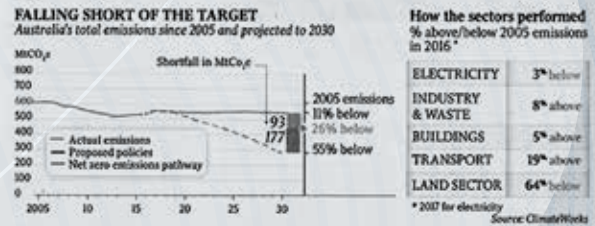
In the midst of heated national debate on energy emissions, we released a new **Tracking Progress to net zero emissions** report, a whole of economy assessment which charts progress on reducing emissions across the Australian economy and the outlook to 2030. The report showed Australia is not yet on track to meet its emissions reduction targets as stipulated under the Paris Agreement - but there are still many opportunities to get there.

It received significant positive media attention nationally, which included our findings featuring in an interview with Shadow Environment Minister Mark Butler on Sky News' Speers on Sunday.



Australian Financial Review, September 6, 2018

Halfway to 2030 deadline, we're going backwards on Paris target



GRAHAM LLOYD
ENVIRONMENT EDITOR

Australia is still well short of meeting its 2030 Paris Agreement target to cut greenhouse gas emissions, with progress stalled in most sectors and reversed overall, a new report has found.

ClimateWorks said Australia needed to double its emissions-reduction progress to achieve the federal government's target of 26-28 per cent below 2005 levels by 2030, and triple progress to reach net zero emissions by 2050. The shortfall in emissions sav-

80 million tonnes and industry a further 45 million tonnes. Building and transport had potential savings of 21 million tonnes and 27 million tonnes respectively.

Overall, the ClimateWorks snapshot found Australia's emissions were 11 per cent below 2005 levels in 2017, but had been steadily increasing since 2013.

Much of the rise was due to higher levels of economic activity. The latest update marks the halfway point in meeting the 2030 target, from the 2005 baseline, and builds on a comprehensive ClimateWorks 2014 report which tracks emissions by major sectors.

higher than 2005 levels in the industry, building and transport sectors.

Ms Skarbeck said the research showed emissions were not projected to fall any further by 2030 under current and proposed policies, including the national energy guarantee, with the proposed electricity target of 26 per cent for the National Energy Market.

Electricity sector emissions had fallen slightly to 3 per cent below 2005 levels and were projected to fall to 21 per cent below 2005 levels under existing and proposed policies including a 25 per cent target for the NEM.

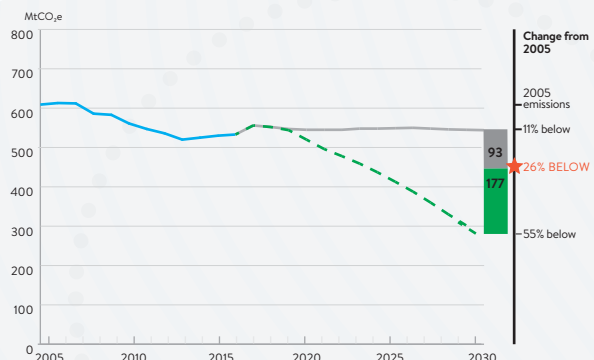
The Australian, September 6, 2018

Earlier, we had finalised a policy report contributing advice for the Climate Policy Review (i.e. what should the government do to achieve its 2030 target and enable deep decarbonisation to 2050) and another report, **Solving the gas crisis - a big problem deserves a big solution** about the potential for the demand side through energy efficiency and fuel shifting.

TRACKING PROGRESS REPORT:

Total emissions since 2005, projected emissions to 2030 under proposed policies, with gaps to 26% target and to net zero pathway

- Actual emissions
- Proposed policies
- - - Net zero pathway



We extended our work to South East Asia and the Pacific

INTERNATIONAL

ClimateWorks Australia has been welcomed by Pacific Island and South East Asian countries to share our learnings and capacity building through translation and application of the proven **Pathways to Deep Decarbonisation in 2050** approach.

In 2017, we formally launched our international program to dedicate resources to supporting capacity building in up to 10 developing countries across these regions through a partnership approach.

We first released an Issues Paper, **Taking the long view**, which made the compelling argument that decarbonisation (or avoided growth in emissions) is not only possible for developing countries, it is in fact essential for the achievement of other sustainable development goals. While this will mean complex and difficult adjustments, it is a priority if emerging economies are to achieve sustained economic growth, social development outcomes, and a safe climate.

We then published **How developing countries can prosper in a rapidly decarbonising world**, which demonstrated that rapid development can be achieved without significantly increasing emissions, and that this decoupling gives developing countries the best potential for prosperity in a rapidly decarbonising world.

This was presented at the International Conference on Sustainable Development and the Low Carbon Solutions Conference.

“THE CEO OF 2050 PATHWAYS PLATFORM CALLED OUR TAILORED LONG-TERM LOW EMISSIONS DEVELOPMENT GUIDE FOR PACIFIC ISLAND COUNTRIES “...THE BEST APPROACH I’VE SEEN TO LONG TERM PLANNING TO DATE.”

We were also invited to co-facilitate a session on integrating adaptation in long term strategies at the first global long term strategies meeting in Bangkok.

And we were commissioned by a leading international funder, to work with Pacific governments and advisers and translate our 4 pillars approach into a step-by-step tailored guide for Pacific Island countries seeking to create long term climate resilience, net zero emissions development, and a sustainable future. The resulting **Horizon to horizon** guide within the **Pacific Package**, was launched during Climate Week in New York. We are now advancing projects and partnerships in South East Asian countries.

We asked how innovation and technology could change our decarbonisation trajectory

AGENDA SETTING

Since publishing the award-winning **Pathways to Deep Decarbonisation in 2050** report with ANU in 2014, promising technological and social innovations have rapidly advanced to offer new potential for major emissions reductions.

No widely-used climate modelling currently incorporates the very real benefits and risks of these disruptive innovations, meaning governments, corporates and investors cannot take all climate-related risks and opportunities into account when designing their climate policy, planning and investment strategies. And so this year we began a pivotal new body of work in earnest: ClimateWorks' **Decarbonisation Futures** project.

The **Decarbonisation Futures** project will leverage the collective knowledge of ClimateWorks Australia, CSIRO and industry, applying newly-developed

AUS-TIMES modelling capability to update assumptions first presented in our 2014 report, adding a focus on technologies and disruptions that could dramatically impact our decarbonisation trajectory.

We will assess various combinations (and strengths) of emerging technologies, social changes and new business models under a range of different scenarios to capture a wide range of potential impacts, covering issues including innovations with the greatest potential, planning around disruptive technology, risk management and the potential benefits of more ambitious targets from both business and governments.

First outputs from the project were delivered late 2018, with the main report due for completion in early 2019.

...and we took a bold new step

LAND USE

Agriculture is an important contributor to the Australian economy, but it's also responsible for 12 per cent of Australia's carbon emissions and half of our fresh water consumption and significantly impacts other systems, such as biodiversity. And so in 2018 we began a bold and ambitious new program called **Land Use Futures: Pathways to a Sustainable Food and Land Use System**.

Working within MSDI, we've partnered with CSIRO and Deakin University to apply the same successful approach used in the Deep Decarbonisation Pathways Project. This will allow us to develop net zero emissions pathways for the land sector that will also achieve other Sustainable Development Goals.

Our project will also contribute to and benefit from participation in the global Food and Land Use Coalition, led by international organisations such as the UN Sustainable Development Solutions Network and the International Institute for Applied Systems Analysis, amongst others.

Launched in October 2018 by world renowned economist Dr Jeffrey Sachs, the project will build a coalition of representatives and influential private, government, research and community organisations to identify gaps, opportunities and priorities in the transition to a sustainable food and land use system.

We invested in the future

EDUCATION + CAPACITY BUILDING

In 2017 we delivered the **BEX5200 Climate Change and Carbon Management Strategies Masters Unit** for the Monash Business School to more than double last year's student numbers with a consistently high student rating.

As the world shifts towards greater accountability for disclosure of climate risk and building climate into core strategies, businesses are also increasingly realising climate change is a financial and strategic issue. Following significant interest from senior executives and business managers, we have co-designed the Integrating Climate Into Strategy executive education course with the Monash Sustainable Development Institute. This will be launched in 2019 both as an open executive education offering through Monash University and as a tailored program, designed for sectoral peak bodies, business or government agencies.

We are also developing core education content on topics supported by our research and experience including Climate change risk and opportunity analysis; Development and strategic use of climate related financial scenarios and Incorporating scenario outputs into strategy.

Our Generation Yes program continued to translate and socialise solutions stories from our work and around the world: Through our community of practice we continued to engage leading organisations and influencers

in peer-to-peer knowledge sharing, supporting these partners through co-designing approaches and building capacity with their own organisations, to more effectively engage with their suppliers and customers. This work has resulted in a total reach of about 4.5 million Australians!

We also supported cross-sectoral communications, covering capital cities, health, the social sector, and education, delivering activity including convening a capital cities Net Zero leadership group through several engagement sessions.

"JOHN F KENNEDY ONCE SAID, "BY DEFINING OUR GOAL MORE CLEARLY, BY MAKING IT SEEM MORE MANAGEABLE AND LESS REMOTE, WE HELP ALL PEOPLE TO SEE IT, TO DRAW HOPE FROM IT, AND TO MOVE IRRESISTIBLY TOWARDS IT." I MENTION THIS BECAUSE ONE OF THE UNITS OF THE MONASH SUSTAINABLE DEVELOPMENT INSTITUTE - CLIMATE WORKS - IS DOING EXACTLY THAT, IN AN ABSOLUTELY COMPELLING WAY."

- JEFFREY D.SACHS, DIRECTOR - UN SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK

We delivered climate change scenarios for leaders in finance and government

SCENARIOS

This year we worked with EY to support a Commonwealth Bank project mapping the impact of different climate change scenarios on their lending portfolio, identifying opportunities and risks associated with climate change transitions. Our analysis featured prominently in the Bank's 2018 Annual Report.

We were asked by CSIRO to lead the development of the Energy and Natural Resources streams of the Australian National Outlook 2.0 and played a critical role driving the overall project narrative and assuring results from global modelling. The national project is soon to be published.

"(SUPPORTED BY EY AND CLIMATEWORKS AUSTRALIA) WE HAVE UNDERTAKEN SCENARIO ANALYSIS TO ASSESS THE TRANSITION RISKS AND OPPORTUNITIES IN OUR BUSINESS LENDING PORTFOLIO, COVERING COMMONWEALTH BANK, BANKWEST AND ASB."

- COMMONWEALTH BANK ANNUAL REPORT, 2018

And we co-authored a chapter in the Centre for Policy Development's (CPD's) Climate Horizons Report: **Scenarios and Strategies for Managing Climate Risk**. This report went on to win and share the 'Best Investor Relevant ESG Research from a non-broking firm' Award, delivered by the Responsible Investment Association Australasia (RIAA) during the 9th ESG Research Australia Awards.

We also worked with ARENA in a project led by the Institute for Sustainable Futures (ISF) and Australian Alliance for Energy Productivity (A2EP).

"ONE CERTAINTY WITH SCENARIOS ANALYSIS IS THAT MOST OF THE SCENARIOS WILL TURN OUT TO BE WRONG...HENCE FOCUSING ON JUST BAU IS A HIGH RISK STRATEGY. THAT IS WHY IT IS IMPORTANT TO DEVELOP A RANGE OF SCENARIOS THAT LOOK TO KEEP AHEAD OF THE CURVE RATHER THAN CONTINUE PLAYING CATCH-UP."

- CARBON TRACKER AND GRANTHAM INSTITUTE, 2017

...and we partnered on many more projects

MONASH

Supported by analysis and inputs from ClimateWorks, our co-founder, Monash University, announced it would become the first university in Australia to achieve net zero emissions by 2030 across all Australian campuses.

The Monash Net Zero Initiative was developed in collaboration with ClimateWorks Australia and aims to achieve net zero carbon emissions from Monash's built environment by 2030, paving the way to a future powered entirely by renewable energy. It was given a global thumbs up in late 2018

when it won an international UNFCCC Momentum for Change Lighthouse Award. We also completed a Monash Demand Management Study Project within this body of work.

ClimateWorks led the development of a heatmap to quantify the opportunity for energy productivity in key economic sectors and technologies. And we completed a project for Sustainability Victoria assessing how their Take 2 program can contribute to Victorian emissions reduction targets.

We supported governments to curb transport emissions

TRANSPORT

We released **The future of private transport in Australia** report to help understand future transport challenges and opportunities. The Federal Government's proposed model for vehicle emissions standards was in line with our recommendations and we're contributing to policy discussion with the Ministerial Forum on Vehicle Emissions Standards.

We organised international transport emissions regulation expert, Dr Anup Bandivadekar, from the International Council on Clean Transportation, to visit Australia and brief key government and industry stakeholders on the design and benefits of stringent light vehicle emission standards. The trip was a great success, with 11 events and briefings run across three states, including meetings with Ministers co-chairing the Ministerial Forum on Vehicle Emissions.

We also launched the second edition of the **State of electric vehicles in Australia** report with the EV Council. The report was shared with several Ministers and Advisers and continues to have impact.

We presented at both the Australian Government Senate Select Committee on Electric Vehicles and Victorian Parliamentary Enquiry into Electric Vehicles, with submissions covering the social, environmental and economic benefits of electric vehicles and the policies needed to encourage electric vehicle uptake.

And we're currently partnering with the Electric Vehicle Council and the Municipal Association of Victoria to help more than 30 local governments increase electric vehicle uptake in their fleets.



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To be part of our impact story, or to double your impact through our matching grant, contact us.



MONASH
SUSTAINABLE
DEVELOPMENT
INSTITUTE



THE MYER
FOUNDATION

ClimateWorks Australia is an expert, independent adviser, committed to helping Australia and our region transition to net zero emissions. It was co-founded through a partnership between Monash University and The Myer Foundation and works within the Monash Sustainable Development Institute.