Once you have momentum, it’s much easier to keep going.
to net zero by 2050
The Paris Agreement now commits the world to achieving net zero emissions by the second half of the century. For the developed world that goal needs to be achieved by mid century.
Specifying a ‘net zero emissions by 2050’ target was central to ClimateWorks Australia’s 2014 report, ‘Pathways to Deep Decarbonisation in 2050’. Since the Paris Agreement signing in December 2015, ‘net zero by 2050’ has increasingly entered mainstream language as ‘the goal’ if we’re to keep temperature increase well below 2 degrees (aiming for 1.5 degrees).
In December 2015 and for the first time in history, the world agreed to legally binding limits to global temperature rise with the Paris Agreement. It came into force in November 2016 - faster than any international accord before it.
Since Paris, several Australian state governments, two of the big four banks, along with government departments and peak bodies in the buildings and transport sectors have all approached ClimateWorks Australia - a trusted adviser - calling on our expertise: They know we understand the net zero emissions by 2050 ask, and can identify pathways to get there.

Governments are now paying us to finish our work on building upgrades. We are at the forefront of planning to regulate emissions from cars. Our energy system analysis, used in the Finkel review, is now being progressed by the federal government.

Momentum is building.

But we are at a precarious point: Helping governments, businesses, investors to make commitments is just the beginning. Now we must help them finish the task - to implement the policies and practices that will get them to net zero emissions by 2050. Vitally, we must also ensure the policies necessary for net zero success are agreed and actioned at the Federal level; Without a whole of economy approach, Australia cannot achieve our Paris Agreement commitments.

More broadly, it has been another big year for ClimateWorks. We continued to deliver impact both through collaborative projects and our own initiatives. Every step of the way, philanthropic support was pivotal to our success. We continue to interrogate the biggest emissions reduction opportunities, to be invited into highest level discussions and planning, because we are expert, independent and trusted. This report proudly demonstrates many of our significant contributions over the past year.

Thank you to all who continue to make this possible - to The Ian Potter Foundation, the Robert Hicks Foundation, Lord Mayor’s Charitable Foundation, our private supporters, The Myer Foundation and Monash University - all significant supporters of our work. Also to the generous supporter now matching every new additional philanthropic dollar gifted to ClimateWorks Australia - so donors can now double their impact. We deeply appreciate philanthropy’s vital role in supporting our momentum to date and urge your continued support.

Going forward, Australia must step up if we are to position ourselves for a prosperous, low carbon future and play our part in addressing climate change.
of Australia’s emissions are now covered by the net zero in 2050 target*

* Based on state jurisdiction commitments, 2015 data
ClimateWorks’ analysis has directly informed the net zero targets of jurisdictions covering 56% of Australia’s emissions.
The COAG Energy Council agreed with the Finkel Review recommendation that by 2020, Australia should set an emissions reduction trajectory to 2050.

ClimateWorks will work towards ensuring we not only reach the -26% reduction that Australia has already committed to (which we aren’t yet on track to achieve) but further, that we strengthen our 2030 reduction target to -55%, in line with ClimateWorks’ deep decarbonisation pathway.
Gov. projections

2005 emissions 595 MtCO₂e

Actual emissions
Likely emissions if policies don’t change

Needed to achieve current 2030 target

What we must do to 2030, 2050

© ClimateWorks Australia
Which decarbonisation steps did our work impact this year?

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

PRODUCE CLEANER ELECTRICITY
Transition our electricity generation away from burning fossil fuels to cleaner, low emissions sources such as wind, solar and geothermal.

SWITCH TO CLEANER FUELS
Once our electricity is powered by clean energy, switch every energy-using activity we possibly can to electricity and everything else to low emissions alternatives (eg from coal and oil to biofuels).

SORT OUT AND STORE THE REST
Reduce non-energy emissions like agricultural and industrial gases and store remaining emissions through actions like planting carbon forests (also known as bio-sequestration).

The ‘four pillars of decarbonisation’ above are based on the ‘Pathways to Deep Decarbonisation in 2050’, report led by ClimateWorks Australia and the Australian National University, using modelling from CSIRO and the Centre of Policy Studies at Victoria University.
- Co-authored (with ASBEC) Building Code Energy Performance Trajectory Project Issues Paper
- Supported Electric Vehicle Council launch
- Advised Vicinity Centres on long term low carbon target
- Victorian Govt net zero emissions target legislated
- Generation Yes launches in Melbourne and Sydney
- The Path Forward For Electric Vehicles report
- Authored Top 10 EV Myths busted
- Report for Monash University on transition to net zero emissions
- Completed NABERS Energy and Water Jakarta pilot
- Analysis to support Westpac’s Climate Change Position Statement
- Supported Queensland Govt net zero emissions announcement
Authored Power Up report
Modelling for CSIRO Low Emissions Technology Roadmap
Analysis for ENA/CSIRO Electricity Transformation Roadmap
Author's report on business re how to prepare for 2 degree economy
Vehicle Emissions Standards - 2 submissions to Ministerial Forum
Submission to review of Australia's Climate Change policies
Did analysis for DELWP (Water Corps) re cost of net zero
Scoping for Pathways to Prosperity program
Delivered Masters level subject at Monash University
Author's guide for business re how to prepare for 2 degree economy
Generation Yes partners with City of Melbourne at Sustainable Living Festival
Modelling for CSIRO Low Emissions Technology Roadmap
Submission to review of Australia's Climate Change policies
Analysis for ENA/CSIRO Electricity Transformation Roadmap
Authored Power Up report
Did analysis for DELWP (Water Corps) re cost of net zero
Net Zero Emissions by 2050
Media highlight:

ClimateWorks puts vehicles emissions standards in the news

Australia is still one of the only countries in the world without laws around fuel efficiency for our cars. With no other group providing a public voice calling on the need for standards to avoid Australia becoming a dumping ground for fuel-intensive vehicles, ClimateWorks’ Scott Ferraro and Claire Painter persistently maintained a strong media presence across media including ABC News and Fran Kelly’s RN Breakfast. Our message was loud and clear:

"Better fuel efficiency and laws around Australian car emissions could be a win-win for consumers, the government and the environment, potentially saving $100 million tonnes of carbon emissions between 2020 and 2030."
Other activity

5

Submissions
Included a submission to the Review of Australia’s climate change policies, a submission to the Independent Review into the Future Security of the National Electricity Market and a lengthy meeting with Dr Alan Finkel pre Finkel Review release

43

Awards
FINALIST - CLEAN ENERGY COUNCIL AWARDS
FINALIST - 2016 BANKSIA FOUNDATION SUSTAINABILITY AWARDS
CLIMATEWORKS WON UNAA EXCELLENCE IN CLIMATE RESEARCH AWARD
CLIMATEWORKS AND THE MYER FOUNDATION RECOGNISED IN 2017 AUSTRALIAN PHILANTHROPY AWARDS, WINNING BEST LARGE GRANT

20

Conference presentations
Included Green Cities, several UNAA and COP22 related events, APEC Asia Energy Efficiency Conference, Impact Investment Summit Asia Pacific, Australian Emissions Reduction Summit and Net Zero Carbon Roundtable with B Team

Key meetings/briefings
State governments
Queensland
July 2017
The Queensland Government set a target of net zero emissions by 2050. We were commissioned to analyse the state’s emissions reduction potential and found it is both technically and economically feasible for Queensland to achieve net zero emissions by 2050 with currently available technology.

New South Wales
November 2016
The New South Wales Government set a net zero emissions goal for 2050. In addition to working with NSW on energy productivity, the NSW announcement followed direct meetings with us and picked up several ClimateWorks’ recommendations from our report for the Australian Built Environment Council.

Victoria
February 2017
Victoria’s state government passed legislation that enshrined a net zero emissions by 2050 target in law. Their climate change framework is very clearly based on our work. Setting this target was a key recommendation of the Independent Review of the Climate Change Act 2010, which Anna Skarbek co-authored in June 2016. ClimateWorks continues analysis for the government’s 2021-2025 and 2026-2030 targets.

This lead to us working with DEWLP to deliver high level analysis of cost of net zero emissions through renewable energy and carbon offsetting:

Victoria’s water corporations are now required to be leaders in combatting climate change, with metro water authorities to achieve net zero goal by 2030 plus renewable energy use targets of at least 25 per cent by 2020.
Reducing emissions from the transport sector offers one of the lowest cost opportunities across the Australian economy - it’s also currently the only emissions reduction opportunity with bipartisan support.
ClimateWorks key advisor to the Ministerial Forum on Vehicle Emissions Standards

ClimateWorks has been a key stakeholder and adviser to Government and industry, consulting to the Ministerial Forum on Vehicle Emissions, which has been established to investigate the development of light vehicle CO2 emission standards.

To date, ClimateWorks has contributed responses to an initial discussion paper, including a report *The Path Forward for Electric Vehicles*, and two written responses to subsequent consultation papers. In July 2017 the Government released a proposed model for Vehicle Emissions Standards which aligned with ClimateWorks’ advice. The Ministerial Forum is set to make recommendations to Cabinet by end 2017.

The Electric Vehicle Council launches

In March 2016 we identified the need for a national agenda-setting organisation. A year later, a new national body to support the uptake of lower emissions vehicles in Australia was launched at Parliament House. The Electric Vehicle Council (EVC) brings together car manufacturers, energy companies, charging infrastructure and fleet providers and a diverse range of engaged organisations to drive EV uptake in Australia. The Hon. Josh Frydenberg attended, announcing a $390,000 grant to ClimateWorks to support the initiative. We were key to the establishment of the EVC as a national body, and hold a position on their Board. In June 2017 we authored the State of Electric Vehicles in Australia report for the EVC.

Busting myths about electric vehicles

In May 2017, paid by ARENA and working with the EVC, ClimateWorks used facts and figures to bust the top 10 myths surrounding EVs in Australia. This project uncovered some surprising truths to help Australians make a more informed choice around EV ownership. ‘EV Mythbusters’ has become an ongoing reference for seekers of EV facts and visitors to ClimateWorks’ and EV Council websites.
Buildings

National Construction Code

Emissions standards in the National Construction Code haven’t been updated in seven years. With buildings accounting for most of Australia’s electricity demand, placing substantial burden on our electricity system and contributing almost a quarter of national emissions, ClimateWorks put the issue on the national agenda, and generated industry funding and participation to make this happen.

We’ve been working with the Australian Sustainable Built Environment Council (ASBEC) to improve standards - a move that could deliver enormous savings in energy use, costs and emissions, as well as healthier, more productive and resilient buildings for households and businesses. In 2016-17 the project worked with industry and published an Issues Paper inform this analysis.

Report recommendations have now been adopted into the NSW Government Energy Efficiency Action Plan and the National Energy Productivity Plan.

Activity contributing to this included ClimateWorks, ASBEC and the Property Council of Australia (PCA) delivering high level political briefings, including to the Federal Energy Minister’s adviser, the Prime Minister’s Cities adviser, the Federal Shadow Minister for Climate and Energy, and the Greens; briefings with almost every state and territory Government; An invitation for ClimateWorks, ASBEC and the Green Building Council of Australia (GBCA) to present to the SA Climate Change and Carbon Neutral Adelaide Taskforce; and extensive ongoing media coverage.

More ripples

Positive impacts continue to ripple from our July 2016 report for the Australian Built Environment Council (ASBEC) which explored the profound and cost-effective emissions reductions opportunities in Australia’s built environment.
As a signatory to the CitySwitch Green Office program, ClimateWorks continued walking the talk in leading the market for greenhouse performance by managing and measuring our own energy performance to meet the highest standards for office tenancies.

Zero Carbon Incubator

Arising from a 2014 conference in Jakarta, the Zero Carbon Incubator project is a partnership between ClimateWorks Australia, SDSN Southeast Asia, the Green Building Council of Indonesia and the Jakarta Property Institute. It is designed to help Indonesians implement better energy efficiency in their rapidly urbanising nation. Since the initial forum; three on-ground priority projects are underway - we drove the projects, sourced funding, brought together key participants and partners, and project managed these to successful delivery; The NABERS Energy and Water Jakarta Pilot was completed and presented to Indonesia’s Special Envoy on Climate Change; and ClimateWorks has been invited to participate in the Indonesian Pavilion at COP23 in Bonn.
Business

Since the signing of the Paris Agreement, we’ve seen an uplift in the quantity and quality of companies seeking our advice on net zero targets.

“ClimateWorks Australia is leading the world in translating the global pathways to deep decarbonisation research into action for businesses.”

Henri Waisman
Senior Research Fellow, Co-ordinator
Deep Decarbonization Pathways Project
IDDRI
Vicinity Centres

ClimateWorks was commissioned to work with Vicinity Centres, a major retail-focused real estate investment trust that owns Chadstone Shopping Centre. Vicinity was recently ranked number one for sustainability in the Australia and Asia Pacific Retail sectors by the Global Real Estate Sustainability Benchmark and our modelling informed the investigation of a long-term low carbon target for Vicinity Centres’ business.

Monash University

One of our founding partners, Monash University, enlisted ClimateWorks to help develop a Net Zero Emissions Strategy for the University’s Australian operations, resulting in an Australian university first:

Monash announced they are committed to achieving net zero carbon emissions by 2030.

Australia’s largest university will invest $135 million to achieve its aim, with a project called Net Zero.

Westpac

In May 2017, banking giant Westpac released their Climate Change Position Statement ‘Financing the transition to a low carbon economy’, which included work jointly delivered by ClimateWorks and Ernst and Young that analysed climate scenarios along with risks and opportunities for their institutional lending portfolio.

As the third largest company in Australia and one of our biggest business lenders, Westpac’s statement sent an important market signal that they are now considering climate change transition risks when making decisions on lending in their portfolio and are seeking to significantly increase their lending to business activity around climate solutions. (Westpac also announced a $10 billion target for lending to climate change solutions by 2020 and $25 billion by 2030.) In their own words, “This analysis has given Westpac a clearer understanding of its role in actively supporting Australia’s transition to a low carbon economy.”

Rob Kelly
Amandine Denis-Ryan
Wei Sue
Engagement

Generation Yes

“Yes, we’re young and old and everyone in between.”

generationyes.com.au

The Generation Yes program engages, educates and encourages Australians to talk more often and more effectively about climate solutions - and the benefits and opportunities that solving climate change presents. Grounded in ClimateWorks’ evidence-based analysis around pathways to net zero by 2050, Gen Yes adds social research to engage and educate the ‘persuadable centre’ of Australia’s population. At its heart, it taps into the Australian ‘can-do’ attitude required to solve big problems. It is achieving this through highly shareable social media content that educates and demonstrates momentum, builds partnerships to form a community of practice, ‘deep dives’ into key sectors such as health who are highly trusted in communicating about climate change, and a ‘social listening’ tool to measure how effectively Gen Yes is helping to shift the public discourse, along with content and material development.

Pre-tested on half a million Australians

We developed and refined our messaging through social media, reaching almost 500,000 people. When we got it right, we pressed ‘go’ and created videos, a website, a partnership pack and an awesome manifesto to kick-off this new national solutions narrative, with highly encouraging early results. As Gen Yes grows, we’ll translate and socialise more ClimateWorks’ evidence-based analysis to show we have the technology to get to net zero in 2050 while our economy keeps growing - and that there is an achievable plan.

Examples

A partnership with Cool Australia has produced Generation Yes teacher resources. In just the first 3 weeks after launch, they were accessed by 102 teachers, downloaded over 350 times with one teacher calling it the best climate change resource she’d seen in all her years of teaching.

We also created excellent public engagement through partnering with City of Melbourne on a Sustainable Living Festival stall.
“Australia’s ingenuity in solving problems is legendary, and its ‘can do’ attitude is brilliantly harnessed by the Generation Yes campaign. Everyone who joins Generation Yes plays a critical role in fast-tracking the momentum of certainty that we can change the direction of climate change.

It would be hugely exciting to see Generation Yes rolled out across multiple nations, uniting citizens globally to join. A plan for healthy, clean-energy future that thrives on innovation means opportunity and development gains for all. Thank you for your optimism.”

Christiana Figueres
Former head of the United Nations Framework Convention on Climate Change

“The Generation Yes campaign initiated by ClimateWorks Australia is a great way to show solutions to climate change are possible and practical. The four-step plan to reach net zero carbon emissions should be adopted in Australia, and indeed in all countries to keep global warming to well below 2 degrees.

Citizen education and engagement is critical if we are to solve climate change. Generation Yes is an outstanding example of a well-researched and creative campaign that will bring together people from all walks of life around solutions to climate change.”

Professor Jeffrey Sachs
Director, Center for Sustainable Development Columbia University, Special Adviser to the United Nations Secretary General on the Sustainable Development Goals Director, Sustainable Development Solutions Network

Education

For the first time, ClimateWorks delivered a Masters level subject at Monash University, ‘Climate change and Carbon Mitigation Strategies’.

Back in 2013 we developed analysis software for the Carbon Market Institute, a tool incorporated into a 2014 unit at Monash called ‘Carbon Emissions Trading’. We guest lectured in 2015 and in 2016, took over the course and revamped content for around 30 students. After excellent feedback it became a core subject for a Masters of Business - Sustainability stream in 2017 with almost 80 students. Further executive education is now in the planning phase.
Building capacity in our regional neighbours

August 2016
ClimateWorks’ Chair John Thwaites, and Head of Engagement, Meg Argyriou attended the Green Climate Fund’s Pacific Islands Regional Workshop. Board member Sam Mostyn was also there in her role as Chair of Citibank Australia.

ClimateWorks’ expansion into the international space, particularly in Southeast Asia and Pacific regions is crucial, given the striking reality of climate change impacts in these regions. Rising sea levels and extreme weather events are already wreaking havoc and many island nations have adopted the motto ‘1.5 to stay alive’. But implementing an effective long term low emissions development strategy for developing countries calls for the right policy mix, political and business support, supply chain capability, and sufficient local expertise to support project development, financing and implementation. And so the concept for ClimateWorks’ ‘Pathways to Prosperity’ program to achieve lowest emissions development alongside Sustainable Development Goals was presented to attendees. Strong engagement led to an MOU with the Pacific Islands Development Forum and further delivery, tailored to our highly-affected island neighbours.

Head of Implementation, Scott Ferraro, was later invited by the Pacific Islands Development Forum to a conference in Samoa, to advance the capacity for Pacific Island nations to be fully represented in international climate change discussions. We also provided technical support for member countries’ negotiating positions in the lead up to the United Nations Convention on Climate Change COP in Marrakech, with both John Thwaites and Scott Ferraro attending as part of the Solomon Islands delegation.
Oct 2016
CSIRO commissioned ClimateWorks to analyse the potential for a gas-to-electricity shift in residential, commercial and industrial sectors, for the Electricity Transformation Roadmap - a joint report by CSIRO and Energy Networks Australia. The report found that creating a net zero electricity grid by 2050 is not only technically possible, it will save households AUD$414 a year on energy bills, cut total spending by over AUD$100 billion and make a giant dent in national carbon emissions.

Jan 2017
CSIRO released a Low Emissions Technology Roadmap outlining technology options required to meet Australia’s emissions reduction goals and steer us towards a secure energy future. ClimateWorks’ Analyst Tom Yankos was seconded to CSIRO for 5 months to develop the model that calculated energy productivity savings from particular low emissions technologies - which proved crucial to the report. Australia’s Chief Scientist was briefed on findings during his preparation of the Finkel Review.

Feb 2017
ClimateWorks with Seed Advisory, released ‘Plug & Play; Facilitating grid connection of low emissions technologies’, designed to help identify and drive solutions that make existing and emerging tech for grid connections as easy and cost effective as possible, while safeguarding electricity supply. Next step: Seeking funding to develop, socialise and build support for policy proposals addressing key issues raised.
Agenda setting work
Power Up

With important energy policy decisions for Australia looming in 2017, ClimateWorks authored a mid year report, *Power Up: Australia’s electricity sector can and should do more to deliver on our climate commitments*. Our research showed Australia’s electricity sector can cut emissions by 60 per cent below 2005 levels by 2030, allowing Australia to achieve its current 2030 target without added action in other sectors. Further, the electricity sector is well placed to deliver emissions reductions beyond a proportionate share. The report recommended the federal government sets an emissions reduction trajectory and additional policy for the electricity sector to ensure the smooth shift to reliable, low cost and low carbon energy. This is now being progressed by the Federal Government through Finkel Review recommendations.

Helping business prepare for a two degree economy

Climate change presents significant and unique challenges to the business models of many companies and, long term strategies to prepare are often left out of company planning and reporting activity. And so ClimateWorks authored a guide in May 2017, titled *The global transition to a two degree economy has begun. Here’s how you can prepare* showing how business can prepare for a low carbon future.

**ClimateWorks’ submission to the review of Australia’s climate change policies**

Our May 2017 submission outlined the importance of a target of net zero emissions by 2050, drawing on our engagement with key stakeholders and extensive research demonstrating we can reach net zero emissions while growing employment and our economy. We also made the case that while delay and policy uncertainty will increase costs, a net zero by 2050 target as part of a long-term plan, will enable an effective transition.
When you’re building momentum, you don’t take your foot off the pedal.
Current and proposed policies aren’t enough to meet our 2030 target, despite strong potential to do more. (Current policy achieves 12% below 2005 levels by 2030 = gap of 82 MtCO2e)
As this report was in production, the ClimateWorks team was devastated by the sudden passing of our dear friend and colleague, Adam Majcher.

The culture at ClimateWorks means we often describe ourselves as ‘family’. We are a tight-knit, incredibly dedicated team who share many values. This genuine bond extends to our funders and to many with whom we work collaboratively. It is impossible to describe the impact of losing a person of Adam’s calibre from such a team.

Adam truly embodied his Engagement Manager title: A ‘people person’ to the core, Adam’s charisma, intelligence and dedication ensured that everyone who met him wanted to be part of what he was creating. At ClimateWorks, the centre of his efforts was Generation Yes, an ambitious engagement project taking our work and other exciting climate solutions to a broader audience - empowering all Australians with the knowledge we can solve climate change, we have all the tools we need and we have a plan, we just need to get cracking. In its very DNA, Generation Yes is infused with the optimism and sense of community that embodied Adam Majcher.

Adam committed his life to making the world a fairer, more just place. Everyone at ClimateWorks along with his many extraordinary supporters will ensure his legacy is honoured, ensuring that Generation Yes - the generation changing climate change - continues to grow and deliver on this commitment.

We stand with Adam’s wife and daughter, his broader family, his incredible network of friends, his professional partners and connections, admirers and communities, all of whom continue to feel his loss deeply. This report is dedicated to Adam, to the positive impact he had on all our lives and to his passion for sharing solutions that can deliver a safe climate.

Vale Adam Majcher
ClimateWorks Australia is an expert, independent adviser, committed to helping Australia transition to net zero emissions by 2050. It was co-founded through a partnership between Monash University and The Myer Foundation and works within the Monash Sustainable Development Institute.