Climate Council of Australia

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About the Climate Council

Climate Council is Australia's own independent, evidence-based organisation on climate science, impacts and solutions.

We connect decision-makers, the public and the media to catalyse action at scale, elevate climate stories in the news and shape the conversation on climate consequences and action, at home and abroad.

We advocate for climate policies and solutions that can rapidly drive down emissions, based on the most up-to-date climate science and information.

We do this in partnership with our incredible community: thousands of generous, passionate supporters and donors, who have backed us every step of the way since they crowd-funded our beginning as a non-profit organisation in 2013.

To find out more about the Climate Council's work, visit www.climatecouncil.org.au.

1. Introduction

Australia's journey to net zero is only beginning. Over the next eight years to 2030, we will need to get on a steep trajectory of emissions reductions, with existing efforts ramped up significantly and quickly. Climate Council welcomes the Australian Government's commitments to invest in renewable energy transmission infrastructure and generation projects, reform the Safeguard Mechanism and accelerate the decarbonisation of Australia's private transport fleet as important steps to achieve this. But more action and investment will be needed to drive the full decarbonisation of Australia's economy.

There is much at stake and no time to lose. The world has already warmed by around 1.2°C and Australia is suffering significant losses from climate change with worse on the way. Extreme weather events – such as bushfires, floods, heatwaves and droughts – are happening more often, and are more severe. To avoid the worst climate impacts, global emissions must halve this decade with net zero reached in the early 2040s. Australia is a wealthy country and among the worst polluting countries on a per person basis. We also have immense renewable energy resources, which means we can cut emissions faster. That is why Australia should aim to reduce our emissions by 75 per cent (below 2005 levels) by 2030, and reach net zero emissions by 2035.

Alongside this need to quickly reduce emissions, Australians are facing significant cost-of-living pressures that have been years in the making but have come to a head in the last 12 months. Wholesale electricity prices skyrocketed to all-time highs in the second quarter of 2022, with retail electricity prices following suit. Russia's war in Ukraine has driven the price of gas and oil sky-high with drivers paying more than $2 a litre for petrol at its peak. These price rises are directly affecting the hip pocket of Australians and adding inflationary pressures to the economy, worsening the cost-of-living crisis.

We can and must tackle the climate, energy and cost-of-living crises simultaneously. By reducing Australia's reliance on fossil fuels like coal and gas, the Australian Government can address climate change, as well as our energy and cost-of-living crises.

The majority of emissions in Australia come from fossil fuel sources in energy, transport, and industry (including industrial processes and product use) sectors. The remainder come from non-fossil fuel sources.

Electricity generation accounts for around 32 per cent of Australia's emissions, industry accounts for around 38 per cent, and transport accounts

for around 19 per cent. When considering emissions at the point when electricity is consumed rather than when it is generated, buildings and industry represent a much larger share at around 21 per cent and 47 per cent respectively. Whichever way you look at it, moving away from fossil fuels and driving down emissions across electricity, transport and buildings is crucial to tackling climate change. This submission identifies a range of priority opportunities and investment-ready initiatives which could be implemented alongside the Australian Government's existing agenda to accelerate climate action this decade.

Alongside making smart investments in decarbonisation, it is critical that the Australian Government ceases direct and indirect subsidies for fossil fuels in all forms. The Albanese Government's first budget in October 2022 took welcome steps to re-prioritise funding previously allocated for polluting fossil fuel projects, but there is more to do. In particular, structural subsidies like fuel tax credits are a large drain on public resources while actively *disincentivising* the transition which needs to happen to cleaner sources of energy. These must be phased out as soon as possible; this would free up billions of dollars a year for reinvestment into the transformation of Australia's fleets and other action to tackle climate change.

Lastly, in addition to transforming our own energy system and reducing Australia's domestic emissions as far and fast as possible, the Australian Government can play a crucial role in helping drive climate action globally, and improving the resilience of Australian communities to the threats they are already facing due to accelerating climate change.

The Climate Council welcomes the opportunity to provide this submission to the Australian Government to inform development of the 2023-24 Commonwealth Budget. Our team of expert policy advisers, researchers and climate science experts would be pleased to engage with The Treasury to provide further detail and advice on any of the matters discussed throughout.

Recommendations

The Climate Council's recommendations are summarised below; further discussion and supporting data on each is outlined through this submission.

Energy transformation

Recommendation 1

The Australian Government work with states and territories to advance investment in, and rapid delivery of, all priority transmission infrastructure projects identified by AEMO as necessary to support a 100 percent renewable electricity grid.

Recommendation 2

The Australian Government develop a package of financial and policy measures to support the electrification of homes and small businesses, including:

- A concessional financing facility for capital upgrades and replacement of gas appliances - delivered in partnership with the states and territories;
- A progressive phase out of gas appliances by requiring new residential and commercial buildings to be all-electric and banning replacement gas appliances from 2025.

Recommendation 3

The Australian Government support and enable energy transformation by local government through the establishment of a Local Government Climate Innovation Pilot Fund and/or a zero interest loan facility for investment in proven zero emission energy solutions.

Recommendation 4

The Australian Government establish and properly fund a National Energy Transition Authority, tasked with planning for - and maximising the benefits from - Australia's energy transformation. The Authority's priority tasks would include negotiating firm closure dates and developing transition plans for Australia's fleet of coal fired power stations.

Recommendation 5

The Australian Government undertake a detailed review of existing fossil fuel subsidies currently included within the Commonwealth Budget - including fuel tax credits - as a first step towards the removal of these subsidies in future budgets.

Clean transport

Recommendation 6

The Australian Government design and implement strong fuel efficiency standards as part of a holistic National Electric Vehicle Strategy. The proposed parameters for Australian fuel efficiency standards should be released alongside any investment or other enabling initiatives linked to this Strategy in the 2023-24 Commonwealth Budget.

Recommendation 7

The Australian Government support states and territories to electrify public transport fleets, strengthen public transport services and significantly improve infrastructure for active transport through shared investment under the Commonwealth infrastructure investment program.

Recommendation 8

The Australian Government develop a transport sector-wide plan for decarbonising transport beyond personal transport, addressing key sub-sectors including aviation, logistics, infrastructure and shipping. This plan should include identification of the viable transition pathways for, and timeframes for implementation by, each sub-sector.

Supporting global climate action

Recommendation 9

The Australian Government commit to a substantial increase in Australia's overall annual contribution to international climate finance, bringing it into line with a fair share of existing global efforts.

The Australian Government announce an initial financial contribution to the new global loss and damage finance facility.

Recommendation 10

The Australian Government commit to scaling-up investment in climate and energy capabilities across government departments including the Department of Foreign Affairs and Trade, as part of an ambitious and comprehensive diplomatic strategy aimed at accelerating the global shift from fossil fuels to clean energy.

Strengthening resilience

Recommendation 11

The Australian Government develop an integrated National Adaptation and Disaster Resilience Strategy and supporting action plan with set deadlines for implementation.

Recommendation 12

The Australian Government conduct a National Climate Change Risk Assessment as a baseline for all levels of government to focus on and coordinate climate adaptation and mitigation efforts. The Assessment should underpin production of a national strategy and plan enabling climate risk information to be mainstreamed across all government agencies and sectors and at-risk communities.

Recommendation 13

The Australian Government work closely with state, territory and local governments to develop a clear framework for improving community resilience when rebuilding after disasters with federal funds - including developing a process for managed relocations of communities which face ongoing and significant risks due to climate change.

Recommendation 14

The Australian Government develop and fund programs which build community resilience to extreme weather and disasters, using examples such as Community First Responder programs as a basis.

Strengthening Australia's climate science capability

Recommendation 15

The Australian Government should commit commensurate and sustained funds and resources for climate research and research coordination in Australia.

Recommendation 16

The Australian Government should commit to funding next-generation regional climate projections for Australia.

Recommendation 17

The Australian Government should step up funding for basic science in universities and government agencies.

Recommendation 18

The Australian Government should commit to funding and resourcing improved climate modelling capability and model development.

Recommendation 18

The Australian Government should commit to providing sustained funding to facilitate engagement and formally sustain Australia's involvement in, and contribution, to key global science programs.

2. Energy transformation

Australia's historical abundance of natural resources has led to a strong reliance on coal and gas to generate electricity and provide energy in our homes and businesses. However, to reach net zero and avoid the worst impacts of harmful climate change, we must now rapidly transform how Australia produces and uses energy.

Driving towards 100 percent renewable electricity

Transforming Australia's electricity sector to run on as close as possible to 100 percent renewable energy within the next decade is crucial for achieving emissions reductions at the scale required, as well as supporting further decarbonisation in transport, buildings and industry through electrification. The 'Strong Electrification' pathway outlined by the Australian Energy Market Operator's (AEMO) in its Integrated System Plan details how Australia can achieve almost 100 per cent renewable energy in the National Electricity Market (NEM) by 2030.

Under this pathway, the NEM would need approximately 40 gigawatts (GW) of new wind capacity and 40GW of new utility and rooftop solar capacity – tripling and doubling existing capacity of those two resources respectively this decade. Electricity consumption would grow around 40 per cent due to electrification in other sectors by 2030. By mid-century, the total generation capacity of the NEM will need to quadruple to accommodate an increase in consumption of around 133 per cent supporting electrification in buildings, industry and transport.

Climate Council applauds efforts by the federal, state and territory governments to rapidly accelerate new renewable energy transmission and infrastructure projects which will deliver on the current national target of 82 percent renewable electricity generation by 2030. Recent developments such as the co-financing of the VNI West (KerangLink) and Marinus Link transmission projects by the federal, Victorian and Tasmanian governments and the declaration of designated zones for the delivery of offshore wind projects will do much to unlock renewable investment while making energy prices lower and more stable going forward. Commitments by the Victorian and Queensland governments to work towards ending coal fired power generation in these states by the early-to-mid 2030s also set the electricity sector on a clear transformation pathway.

We recommend that these efforts be continued and further ramped up - with an emphasis on delivering the full suite of transmission infrastructure projects recommended by AEMO to support a grid powered 100 percent by

renewables. Achieving this penetration of renewables while rapidly electrifying other parts of our economy would prevent 196 million tonnes of carbon dioxide equivalent (Mt CO_2e) being released into the atmosphere by 2030 relative to AEMO's 'Step Change' scenario. These avoided emissions add up quickly over time – by 2050 Australia's electricity sector would produce half as many harmful emissions compared to the Australian Government's existing plans (480 Mt CO2e instead of 891 Mt CO2e).

Switching to renewable energy will permanently drive down power bills and keep them lower. The Australian Capital Territory is already sourcing 100% renewable electricity, and power prices in that jurisdiction *decreased* in 2022 while they were rising in all other states and territories. When the International Energy Agency analysed power prices during 2022 following Russia's illegal invasion of Ukraine, it found: "higher shares of renewables were correlated with lower electricity prices."

The faster Australia moves towards renewable electricity powered by the wind and sun (which is effectively free fuel), the sooner households and businesses will benefit from more affordable power bills. Importantly, it is possible to do this in a way that improves the security and reliability of our power system by backing up renewables with storage options like pumped hydro and batteries. These investments will be incentivised by the new Capacity Investment Scheme agreed by Energy Ministers in late 2022, which has a welcome focus on the delivery of new clean and affordable capacity options.

Recommendation 1

The Australian Government work with states and territories to advance investment in, and rapid delivery of, all priority transmission infrastructure projects identified by AEMO as necessary to support a 100 percent renewable electricity grid.

In parallel with transforming how Australia produces energy, we must also drive a major shift in how it is used in our homes, businesses, community facilities and more. The following recommendations address policies and initiatives that will reduce the overall demand for electricity and support Australians to progressively eliminate the use of fossil fuels.

Supporting homes and businesses to switch to cheaper, cleaner power

Australian households are trapped by escalating gas bills, which are fuelling a cost-of-living crisis. People should not have to choose between heating or

eating. Nor should Australians be forced to keep burning toxic gas in their homes, which carries well-established health risks. Getting off gas - by switching to electric cooking, heating and hot water - will free Australians from paying exorbitant gas bills, and create a safer home.

Gas appliances - including stovetops, heaters and hot water systems - are an outdated technology with no place in the modern home. They are more expensive to run, as well as polluting. Gas is also a fossil fuel that is contributing to worsening climate change, with major impacts like heatwaves and bushfires occurring more frequently, or becoming more severe.

Climate Council analysis indicates that modern electric appliances are cheaper to run than gas alternatives in all Australian capital cities. Annual bill savings for households which are fully electric range between $514 and $1,899 depending on the market. The biggest bill savings are to be found in Brisbane, where gas is significantly more expensive than other capital cities, and in Hobart and Canberra due to their colder climates. For Australians living in one of the more than three million homes with solar panels on the roof, switching to electric heaters, cooking appliances and hot water systems could save them roughly $800 more on bills every year.

The biggest barrier for households going fully electric is the upfront cost of replacing appliances. Once electric appliances are installed, households enjoy immediate savings of hundreds of dollars every year. However, the combined cost of buying a new stovetop, room heaters and hot water system is a barrier for many households that want to get off gas now.

Victoria and the Australian Capital Territory already offer government incentives which reduce payback periods for new appliances in these jurisdictions by up to two years. Government assistance with the up-front costs for households, such as zero-interest loans for buying new electric appliances, will help ensure all Australians – including low-income households – can immediately start enjoying the cost and health benefits of getting off gas.

Low- and zero-interest loan schemes can be particularly helpful because they address the upfront purchase and installation costs for households and are more affordable for governments to provide at scale than direct grants. The Climate Council has prepared a dedicated guide for governments: How concessional financing can help reduce emissions.

In supporting Australian households and businesses to get off gas and move to clean, cheap electric alternatives, it will be important to consider how the Australian Government can most effectively achieve this. There is an urgent need to commence the retrofitting and replacement of appliances in millions of Australian homes and businesses as quickly as possible, and this may not

be best achieved by standing up an entirely new Commonwealth delivery and payments infrastructure.

Instead, the Commonwealth could partner with states and territories to roll out concessional finance schemes modelled on the ACT's Sustainable Household Scheme through a new National Agreement on Energy Transformation. This would leverage the considerable expertise that states and territories have with delivering home and business incentive programs, and combine it with the power of the Commonwealth's balance sheet for its lower cost of borrowing. Coordinating this program nationally would have the added benefit of harmonising the availability of household support for energy transformation across all jurisdictions, where this currently varies significantly around Australia.

For households, zero interest financing is strongly preferable to incentives or deductions offered through the tax system, due to equity considerations. For many households, the main barrier to electrification is the upfront financial outlay. This would not be addressed by any program which provides payments representing only a small share of the purchase cost, at a time which may be well after the point of sale. To ensure that any Australian Government household electrification program directs the most support to those most in need of assistance with this transition, the program design should prioritise options which address most or all of these upfront costs.

In parallel with direct investment in household and business support, the Climate Council recommends the Australian Government take additional regulatory steps to drive the transition to clean, renewable electricity over the coming decade. In particular, we recommend that the next update of the National Construction Code in 2025 commence the phase-out of gas appliances by:

- mandating efficient all-electric builds from new homes and commercial premises
- banning replacement gas appliances in homes as these reach end of life.

These actions are important to ensure that Australians living in rental and social housing are not left behind in this transformation, and see appliances replaced gradually through BAU purchasing decisions as current equipment reaches end of life.

Together, this combination of financial supports and regulatory actions would drive strong momentum towards the electrification of Australian homes and businesses - cutting emissions and cost of living.

Recommendation 2

The Australian Government develop a package of financial and policy measures to support the electrification of homes and small businesses, including:

- A concessional financing facility for capital upgrades and replacement of gas appliances - delivered in partnership with the states and territories;
- A progressive phase out of gas appliances by requiring new residential and commercial buildings to be all-electric and banning replacement gas appliances from 2025.

Enabling local governments to innovate in energy transitions

Local governments are Australia's most significant infrastructure owners and managers, with collective responsibility for over $380 billion in infrastructure and land.[1] They have essential roles to play in achieving Australia's climate targets, both by reducing their own operational emissions and by supporting local residents, businesses and institutions to take stronger climate action.

Local governments throughout Australia are committed to leading the transition to renewable energy. For example, a 2022 Cities Power Partnership survey of 156 Australian councils (30% of all LGAs) found that over 55% of surveyed councils had set or achieved a renewable energy target for their own operations.[2] Local governments can significantly reduce their greenhouse gas emissions and energy costs by upgrading council-owned buildings and infrastructure, decarbonising their vehicle fleets and reducing waste.[3] Cost savings achieved via these upgrades can be diverted to improve other council services.

The development and demonstration of new solutions and operating models is critical to the efficient uptake of climate and energy solutions by local governments at the national scale. However, these processes require upfront capital investment to support feasibility studies, project development and partnership building. As the least funded level of government, most local governments are generally not currently able to fund innovative initiatives. Funding is also required to enable councils to collaborate in delivering regional-scale solutions which can deliver new efficiencies and economies of scale.

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[1] Climate Council Australia, Neighbourhood Issue: Climate Costs And Risks For Councils, September 2021
[2] Cities Power Partnership, *2022 Annual Member Survey*, unpublished.
[3] ClimateWorks Centre, *Net Zero Momentum Tracker*, 2020

Climate Council proposes the Australian Government fund one or both of the two following proposals which would provide support to local government to drive their energy transitions:

- Establish a **Local Government Climate Innovation Pilot Fund of $200 million over two years** to support councils in developing and demonstrating replicable approaches to reducing operational emissions through innovative building energy performance upgrades, renewable energy, and sustainable transport. Funding criteria could be set to achieve particular outcomes. This could include, for example, setting a maximum project timeline of three years and favouring projects that seek to achieve scalability and replicability.
- Establish a **$500 million fund to provide councils with zero interest loans for investment in proven climate and energy solutions**, with loans to be repaid using the energy cost savings achieved. Funding may be targeted to the most effective actions councils can take, including building thermal efficiency, electrification, solar PV and appliance upgrades.

Recommendation 3

The Australian Government support and enable energy transformation by local government through the establishment of a Local Government Climate Innovation Pilot Fund and/or a zero interest loan facility for investment in proven zero emission energy solutions.

Supporting good new jobs and thriving regions through a National Energy Transition Authority

The role of coal and gas production in a heavily diversified economy like Australia is easy to overstate. However, there are many communities that have historically relied on the income provided by coal and gas extraction or consumption. Recently, the closure dates of many of Australia's most polluting facilities have been accelerated with owners required to provide three years' notice. It is virtually certain that more closure dates will be brought forward. Seventy per cent – and possibly even all – of Australia's coal generators could retire by 2030. If this is done without advanced planning, communities are likely to be left behind with poor outcomes.

That is why a National Energy Transition Authority should be established to plan for and maximise the benefits from Australia's energy transformation, including setting firm closure dates and developing transition plans for Australia's fleet of coal fired power stations by 2024. Ideally, this authority

would work in collaboration with agencies based in coal and gas regions to support economic diversification and retraining aligned with the priorities and strengths of different communities. Such an authority could also work with communities based in Renewable Energy Zones to facilitate the sharing of lessons. This could help build trust and community support for the energy transformation and ensure good outcomes for all Australians.

A National Energy Transition Authority would enable the transformation of Australia's energy system to more affordable, reliable, zero emissions power while at the same time supporting workforce development, economic diversification and revitalisation of our regional communities. Honest and meaningful engagement with local residents will provide ownership over the transformation of their regions.

There are strong benefits to having a national body, including ensuring that lessons learned in one region are applied elsewhere. A National Energy Transition Authority could work to ensure all stakeholders can meaningfully participate in decision-making processes, have agency over their futures, and are equipped with the information and resources required for the transition.

Many of the levers relevant to transition planning are vested with state, territory and local governments, so the creation of a National Energy Transition Authority will require extensive collaboration across all levels of government, and ideally with Regional Transition Authorities. Many regions have already begun planning for Australia's energy transition through formal or state-funded processes, as well as grassroots or civil society-led initiatives.

Every community also has its own needs and unique challenges. Development of a transition authority should therefore be done in a way that coordinates, amplifies, extends and supports existing local efforts, without duplicating or overriding these.

Recommendation 4

The Australian Government establish and properly fund a National Energy Transition Authority, tasked with planning for - and maximising the benefits from - Australia's energy transformation. The Authority's priority tasks would include negotiating firm closure dates and developing transition plans for Australia's fleet of coal fired power stations.

Ending fossil fuel subsidies

To address the climate crisis and accelerate the transition to a clean energy economy, the Australian Government must stop subsidising fossil fuels. There should be no new commitments of public money for the extraction or consumption of fossil fuels or associated infrastructure. The Government should conduct a detailed review of all existing, ongoing fossil fuel subsidies - including fuel tax credits - as part of a phased approach to removing subsidies in future budgets.

The International Energy Agency (IEA) is clear that there is no place for new fossil fuel projects anywhere if the world is to reach net zero emissions by mid century. The IEA also says government subsidies for fossil fuels need to be eliminated as soon as possible (IEA 2021, pg.139). The UN Secretary General Antonio Guterres states countries need to "end all new fossil fuel exploration and production, and shift fossil fuel subsidies into renewable energy".

Australia committed to "ending inefficient fossil fuel subsidies" at the G20; in regional declarations with Pacific nations; and in the Glasgow Climate Pact. However, in practice, Australia is wasting more public money on fossil fuels. In recent years Australian fossil fuel subsidies for both production and consumption have increased. In 2021- 22 they amounted to $11.6 billion – more than 50 times the annual budget of the National Recovery and Resilience Agency, which supports communities impacted by worsening climate disasters. The International Monetary Fund (IMF) estimates Australian fossil fuel subsidies are even higher. The IMF estimates – which also take into account the health, climate and other pollution costs of fossil fuels – suggest Australian subsidies to fossil fuels are actually worth around AU$65 billion.

The Australian Government is dealing with significant budget deficits, with an aggregate $181.8 billion deficit forecast across the current forward estimates. Reducing taxpayer support for fossil fuel production and consumption would improve the budget bottom line, allowing money to be redirected to other priorities – including the clean energy transition and dealing with the impacts of the climate crisis.

As a first step, Climate Council recommends the Australian Government undertake a review of fossil fuel subsidies currently included in the Commonwealth Budget. This could be conducted by The Treasury or an independent expert body. Given the Productivity Commission's existing, ideologically-informed position on fossil fuel subsidies, it would not be appropriate to task that body with such a review. The terms of reference for this review should include consideration of alignment of all fossil fuel

subsidy expenditure with Australia's emissions reduction objectives; consistency with broader Commonwealth policy; efficiency and equity in the use of public funds.

Recommendation 5

The Australian Government undertake a detailed review of existing fossil fuel subsidies currently included within the Commonwealth Budget - including fuel tax credits - as a first step towards the removal of these subsidies in future budgets.

3. Clean transport

With the transformation of Australia's energy system underway and accelerating rapidly, decarbonising transport is the next frontier for our nation in tackling the climate crisis.

Transport accounts for 18.7 percent of Australia's greenhouse gas emissions, and is the third highest source of emissions behind only electricity and stationary energy. Road transport is responsible for the bulk of transport emissions, with cars and light commercial vehicles alone making up 62 percent of this pollution. Importantly, at a time when emissions from other sectors have started a welcome and necessary decline, personal transport is one of Australia's fastest growing sources of emissions.

Policies and investments that significantly reduce emissions from personal transport can be put in place now using existing technologies. This makes reducing emissions in the personal transport sector quickly this decade much easier than is the case for some other sectors of the economy, where solutions are in earlier stages of development. Given the range of clean transport options that are readily available, the focus for the significant share of sector emissions which is produced through personal transport should be on achieving near absolute zero emissions. This means getting as close to zero emissions as possible with minimal use of offsetting or 'net zero' accounting. Achieving near absolute zero emissions by 2035 in the transport sector will require transport emissions to plummet by an average of 6.99 million tonnes annually, as sharp a drop as experienced due to the impacts of COVID-19 lockdowns in 2019-2020. Even if Australia were to move much slower, and only aim to reach its net zero emissions by 2050, transport emissions would still need to drop by an average of 3.24 million tonnes annually.

Beyond removing a major source of harmful emissions, decarbonising transport will deliver a wide range of further benefits to people living in Australia's cities and regions - including cleaner air, healthier communities, lower travel costs, and much more liveable cities and towns. These will also deliver significant savings to governments in reduced healthcare and disability costs, and benefit Australian households through lower cost of living combined with better quality of life.

Incentivising and enabling uptake of electric vehicles

To decarbonise personal transport, Australia needs to significantly increase uptake of electric vehicles (EVs). This will only be achieved through increased supply of these vehicles. The lack of mandatory fuel efficiency standards in Australia is the primary reason for the low supply of these vehicle models on offer in Australia. Most of our peers already have fuel

efficiency standards and are not facing the same challenge as Australia in securing electric vehicles.

The Australian Government is currently developing a National Electric Vehicle Strategy, with initiatives supporting its implementation expected to be included in the 2023-24 Commonwealth Budget. The Climate Council recommends the Australian Government develop and implement mandatory fuel efficiency standards as a key initiative within that strategy and alongside any further investment in incentives, charging infrastructure or other policy enablers of EV uptake. We recognise that increased uptake of EVs driven by fuel efficiency standards will have implications for the Commonwealth Budget given the recent package of concessional financing and tax incentives introduced to enable EV purchase. This is why we recommend fuel efficiency standards be designed and delivered as part of a holistic National Electric Vehicle Strategy, so that all interactions between policy interventions can be appropriately captured and planned for.

In our submission to the National Electric Vehicle Strategy consultation process, the Climate Council recommended that fit-for-purpose fuel efficiency standards for Australia be designed around the following principles:

- *Australian fuel efficiency standards must be <u>at least</u> equivalent to those in other major global markets.*
  Weaker standards will not achieve the desired objective of increasing supply of affordable and accessible EVs to meet demand across all segments. This is because Australia would remain at the back of the queue when manufacturers are making business decisions about where to direct their available supply of EVs.
- *Australian fuel efficiency standards must set a transition path to see 100% of new vehicles sold be zero emissions as soon as possible.*
  To rapidly drive down national emissions, it is an urgent priority to transition our vehicle fleet to clean alternatives. A new vehicle sold today will generally remain in service for 10 to 15 years - and possibly even longer. Setting a transition path that is overly gradual will mean higher emitting ICE vehicles continue to be sold for longer, reducing our capacity to make significant reductions in transport emissions over the coming decade.
- *The policy architecture for Australian fuel efficiency standards should allow for minimal use of crediting and other loopholes which diminish scheme transparency and effectiveness.*
  Schemes in place around the world allow for varying levels of crediting and bonus arrangements in relation to how different vehicle types are counted. For example, the provision of a single fully electric BEV may accrue multiple ‘credits’ for the purpose of assessing a manufacturer’s

overall fleet emissions intensity. While recognising that crediting arrangements can play a role in incentivising manufacturers to bring particular vehicle types to a market - for example, BEVs over PHEVs - all credits have the potential to dampen the price signals upon which fuel efficiency standards rest. Further, extensive use of crediting can diminish transparency and effectiveness of the scheme by generating a gap between stated targets and the actual effort of manufacturers to reduce vehicle emissions. This is because manufacturers can achieve average emission targets 'on paper' through the use of credits which allow for double or triple counting of the same zero emission vehicle, while having much higher real-world emissions across their vehicle fleet. Where any form of crediting is used, this must be entirely transparent, with the expected impact on overall emissions relative to the standard modelled and disclosed as part of scheme design.

- *Australian fuel efficiency standards should take into account the dynamics of our local vehicle market, while avoiding incentivising the ongoing purchase of large, high emitting vehicles.*
  Climate Council acknowledges that dynamics and consumer preferences within the Australian vehicle market are significantly different from those in some other markets. A clear example of this is the current Australian preference for SUVs and utes, which together made up approximately 75% percent of new vehicles sold in 2021. This compares with just 43% per cent of new vehicles sold in the European Union in 2020. Some of this preference is due to Australia's geography and the needs of particular workers - such as those in the agriculture and construction sectors. However, it should also be acknowledged that some is due to individual consumer preference and policy settings, which may indirectly incentivise the purchase of these vehicles, such as fringe benefits tax settings. Further, the USA vehicle market has similar dynamics to Australia's in that SUVs and utility vehicles represent the majority share of new vehicles sold. This has not prevented the USA putting strong national fuel efficiency standards in place, which have recently been further tightened by the Biden Administration.
- *The policy architecture for Australian fuel efficiency standards should be flexible to evolving technology.*
  Vehicle technologies are changing rapidly and Australia is not the only market that is seeking to drive significant new uptake of EVs. It is therefore important that any policy settings put in place now have the capacity to be reviewed and updated at regular intervals to assess their effectiveness and appropriateness to the prevailing technology and market context. Climate Council recommends a legislated review after the first five years and regular intervals after this time be included in the legislation for Australian fuel efficiency standards. This review would

provide a clearly-signposted opportunity to assess the transition pathway as initially set out at scheme commencement, and identify whether there are opportunities to accelerate this in light of improvements to vehicle technology or regulatory developments in other markets.

Getting the design of fuel efficiency standards right will be challenging. However, doing so will deliver significant benefits for Australia and our environment.

Recommendation 6

The Australian Government design and implement strong fuel efficiency standards as part of a holistic National Electric Vehicle Strategy. The proposed parameters for Australian fuel efficiency standards should be released alongside any investment or other enabling initiatives linked to this Strategy in the 2023-24 Commonwealth Budget.

Partnering with states and territories to boost investment in public and active transport

To play our role in ensuring a liveable future and achieving the science-backed target of Australia reaching net-zero emissions, our country needs to embrace public transport, and active transport options like walking and bike-riding. Electric vehicles are an important piece of the puzzle, but we won't achieve our climate targets with EVs alone. Replacing all dirty petrol cars with electric vehicles also won't address other transport challenges such as car traffic in our cities, and the huge and inefficient amounts of land (for example for parking) that a car-centric transport system requires.

Climate Council therefore recommends the Australian Government work with States and Territories to transition all bus and train fleets to zero emission fleets as soon as possible, starting with a rapid phase out of diesel buses for cleaner, quieter, and more comfortable alternatives. This could be achieved through co-investment both in upgraded fleets, and the capital costs of enabling infrastructure such as the electrification of existing bus depots. ARENA has already contributed to a range of public transport electrification projects in recent years - such as the Next Generation Electric Bus Depot in Leichhardt, NSW. This prior investment provides an evidence base and suite of learnings for expanded Commonwealth investment in the transformation of public transport systems.

The Australian Government should also expand its investment in infrastructure enabling walking and bike riding, by rebalancing the portfolio

of joint infrastructure projects delivered with the States and Territories towards these active transport modes. Road projects receiving Commonwealth funding should be required to make provision for walking and bike riding, such as through the inclusion of off-road parallel shared paths and safe pedestrian crossing infrastructure. Dedicated active transport projects should also be prioritised for Commonwealth co-funding, such as those connecting intra-city suburbs and regions, and addressing locally-identified network gaps or missing links. A re-balancing of Commonwealth investment could drive a significant increase in the quality and availability of active and public transport infrastructure, without significantly increasing the Australian Government's overall spend.

The Climate Council recommends that over time, state and territory governments transition to investing 50 percent of transport budgets in public transport, and 20 percent in active transport. This is in line with global best practice and is an investment benchmark recommended by the United Nations. Currently less than two percent of most state and territory transport budgets around Australia are directed to active transport, falling far short of what is required. Investment in public transport is also often ad hoc and inconsistent, with occasional mega projects like a new tram or rail line obscuring a lack of consistent, steady investment to improve the frequency, reliability and availability of public transport services - particularly in suburbs and regions. The Australian Government can support states and territories to make progress towards these investment benchmarks and deliver far better public and active transport infrastructure across the country through its infrastructure program investment choices.

Recommendation 7

The Australian Government support states and territories to electrify public transport fleets, strengthen public transport services and significantly improve infrastructure for active transport through shared investment under the Commonwealth infrastructure investment program.

Planning for sector-wide decarbonisation of transport

To achieve the significant emission reductions required in the transport sector - an average of at least 3.24 million tonnes annually, and ideally more like 6.99 million tonnes annually - Australia will need a comprehensive and ambitious plan which looks beyond personal transport alone.

The establishment of the Net Zero Task Force within the Department of Infrastructure, Transport, Regional Development, Communications and the

Arts is a welcome development and a key step towards addressing rising transport emissions in Australia. The Climate Council recommends that the Taskforce commission the production of a foundational, sector-wide emissions reductions plan which addresses *all* key transport key sub-sectors including aviation, logistics, infrastructure and shipping. The Plan should provide viable transition pathways for, and timeframes for implementation of decarbonisation solutions by, each sub-sector.

A sector-wide national transport decarbonisation pathway would:

- define the scope of what the transport sector and its key sub-sectors can achieve in terms of rapid emissions reductions this decade, and conversely, identify sub sectors that are more challenging to abate, This will provide a clear indication of the sector's emissions reductions potential and thus, responsibility in relation to other portfolios that currently may be harder to abate;
- garner input from a range of government and non-government stakeholders, securing their expertise, buy-in and cooperation on the emissions reduction task ahead;
- ensure clarity, cohesion and accountability across the variety of national transport stakeholders;
- inform the upcoming priorities and focused work of the Taskforce;
- provide industry stakeholders an indication of the scope and contents of such priorities, enabling them to prepare resources and supply chains as early as possible;
- highlight currently unidentified opportunities for further research and development;
- serve as a leadership tool when it comes to holistic transport decarbonisation planning across Australian states, territories and LGAs;
- propel Australia onto the world stage on matters of clean transport planning, aligning the country with the US following President Biden's *National Blueprint For Transport Decarbonisation*.

Recommendation 8

The Australian Government develop a transport sector-wide plan for decarbonising transport beyond personal transport, addressing key sub-sectors including aviation, logistics, infrastructure and shipping. This plan should include identification of the viable transition pathways for, and timeframes for implementation by, each sub-sector.

4. Supporting global climate action

Australia's future - indeed that of all countries - depends on a substantial increase in the pace of climate action globally. Fortunately, the Australian Government is well placed to play a positive role in helping drive climate action beyond our shores. Doing so is an investment in Australia's future prosperity as we seek to grow the clean export industries of the future, and in the safety and wellbeing of communities in our region and beyond.

By formally bidding to host COP31 in 2026, the Australian Government is committing to take on a vital leadership role during a make-or-break decade for global climate cooperation. This is a tremendous opportunity and one that comes with great responsibility.

Increasing Australia's contribution to international climate finance

The last year has seen the Australian Government begin to undo years of damage to our global reputation by re-engaging constructively with international climate negotiations, strengthening Australia's 2030 emissions reduction target, and joining a number of important international initiatives such as the Global Methane Pledge. One of the most important next steps will be increasing Australia's contribution to international climate finance: funding to support developing countries with building the clean economies of the future, as well as adapting to the impacts of climate change and addressing loss and damage.

In its provision of international climate finance to date, the Australian Government has given appropriate priority to the needs of countries in our region, particularly with respect to adaptation and resilience building, and has wisely chosen to provide grants rather than saddling countries and communities with loans. However, while Climate Council acknowledges these positive trends, we also recognise that the Australian Government's overall contribution of international climate finance has remained very small in global terms - amounting by some accounts to only around a tenth of our fair share towards the longstanding goal of mobilising US$100 billion a year in support from developed to developing countries.

Strategic investments in international climate finance are vital to helping vulnerable communities cope with the impacts of climate change, but also have an important role in supporting the development of markets for new clean exports. Australia will also be expected to contribute to the new fund to address loss and damage from climate change in vulnerable countries. A significant step-up in Australia's overall annual contribution of international climate finance in the 2023-24 Federal Budget will send an important signal that Australia is serious about helping lead the global response to climate

change. It can also go a long way to helping maintain Australia's standing and influence in our region.

Recommendation 9

The Australian Government commit to a substantial increase in Australia's overall annual contribution to international climate finance, bringing it into line with a fair share of existing global efforts.

The Australian Government announce an initial financial contribution to the new global loss and damage finance facility.

Strengthening Australia's climate diplomacy

Transitioning Australia to a clean energy superpower and global climate leader requires placing climate and energy at the centre of Australia's foreign policy, as well as the close integration of trade and industry policy to ensure they are aligned with climate goals.

The Australian Government has begun to integrate clean energy goals into its international trade and diplomatic strategy but much further work remains. The Department of Foreign Affairs and Trade (DFAT) and Austrade must accelerate the integration of climate and clean energy goals across their work, including the pursuit of trade agreements, the management of international alliances and the focus for Australia's aid spending.

Climate Council welcomes the $46m included in October's budget to increase international engagement on climate change and energy transformation, and encourages a further ramping up of this investment. A successful COP presidency will require an ambitious and comprehensive diplomatic strategy aimed at accelerating the global shift from fossil fuels to clean energy and limiting warming in line with the goals of the Paris Agreement. It will require a determined vision and adequate resourcing, including tasking Australia's global diplomatic network with actively promoting climate action.

Recommendation 10

The Australian Government commit to scaling-up investment in climate and energy capabilities across government departments including the Department of Foreign Affairs and Trade, as part of an ambitious and

comprehensive diplomatic strategy aimed at accelerating the global shift from fossil fuels to clean energy.

5. Strengthening resilience

Emergency Leaders for Climate Action (ELCA) exists to catalyse all levels of government to act on climate change. Informed by climate science and centuries of combined experience, ELCA is working to ensure that fire and emergency services are equipped to protect Australian communities from increasingly frequent and damaging extreme weather events.

Climate change has pushed us into a new era of increasingly severe and frequent disaster threats. Our emergency management, response and recovery arrangements, which were set up to cope with a much tamer environment in the 1990s, are falling short of what is needed today. Without major changes, they will certainly not be able to handle worsening threats as global warming escalates.

The following recommendations form the basis of a whole of government response to climate-fuelled disasters. The recommendations primarily focus on reducing the exposure and vulnerabilities to disasters before they occur. However, it is impossible to eliminate all risk and thus our recommendations are designed to improve the community's ability to respond and recover more generally.

Strengthening disaster management coordination

Currently, Australia has different strategies for addressing climate change adaptation and disaster risks - including the National Climate Resilience and Adaptation Strategy and the National Disaster Risk Reduction Framework and supporting action plans. This makes little sense, as the two areas are intertwined and should be integrated across strategy, planning and institutional arrangements.

To ensure improved coordination, and to minimise duplication and waste, the Federal Government should develop an integrated National Adaptation and Disaster Resilience Strategy and supporting action plan with set deadlines for implementation and an ongoing process of review and improvement every five years.

Recommendation 11

The Australian Government develop an integrated National Adaptation and Disaster Resilience Strategy and supporting action plan with set deadlines for implementation.

Prioritising investment in resilience

Between 2005-2022, the Federal Government spent almost $24 billion on disaster recovery and relief, while only $0.51 billion was allocated to resilience. Investing in risk reduction and resilience provides a 'triple dividend' of avoided loss and suffering, reduced disaster costs and potential economic and social benefits even in the absence of hazards occurring.

There is a need to upscale public investments in resilience and develop innovative financing pathways. The process for allocating public funds towards resilience projects must be independent and data driven, ideally deploying an accepted needs-based funding model that ensures funds focus on the most at-risk and vulnerable communities. The Climate Council welcomes the work being done to amend the Emergency Response Fund, which will make $1 billion available for adaptation over the next five years. This is a positive first step to reversing the funding trend that sees the vast majority of disaster-related funds going towards response and recovery.

To build resilience to the out-of-scale disasters we can expect to see occurring more often, much more funding will be needed. Most current hazard maps are based on historical experience and patterns. Changing risk patterns due to climate change means that many building codes and land use planning decisions are based on outdated historical data that leads to climate risk estimates that are underdone.

There is an urgent need for a National Climate Change Risk Assessment to be conducted as a baseline for all levels of government to focus on and coordinate climate adaptation and mitigation efforts. The Assessment should underpin production of a national strategy and plan enabling climate risk information to be mainstreamed across all government agencies and sectors and at-risk communities.

Concurrent with development of the National Climate Change Risk Assessment, the National Emergency Management Agency and Australian Climate Service should focus on combining climate science and hazard analysis to produce downscaled climate modelling and making the data available to all levels of government in forms useful for both planning/policy and emergency management. Improved policy settings are required across all levels of government to prevent buildings being constructed or rebuilt in areas that are, or will be, highly exposed to climate hazards. A key piece is accounting for the 'moving' nature of risk and compound impacts from more frequent and severe disasters, and updating hazard map

Recommendation 12

The Australian Government conduct a National Climate Change Risk Assessment as a baseline for all levels of government to focus on and coordinate climate adaptation and mitigation efforts. The Assessment should underpin production of a national strategy and plan enabling climate risk information to be mainstreamed across all government agencies and sectors and at-risk communities.

Supporting communities to 'build back better'

When local governments rebuild infrastructure with federal funds they must build 'like for like', but this fails to improve resilience and actively embeds vulnerabilities.

Towns, cities and communities must be rebuilt – where appropriate to do so – in a way that takes into account the inevitable future changes in climate and makes them more resilient. In some very high-risk locations, this may mean not rebuilding at all. Managed relocations must be discussed as an option for some of the most vulnerable and exposed communities.

The joint announcement between the New South Wales and Commonwealth governments on land buybacks and relocations in the aftermath of the 2022 NSW/QLD floods is an example of this. However, further schemes must be made available to at-risk communities before a disaster strikes so they can relocate as soon as practical. Diverting some of the more than $11 billion in public money each year that subsidises the fossil fuel industry to this would be a better use of our taxpayer money.

Recommendation 13

The Australian Government work closely with state, territory and local governments to develop a clear framework for improving community resilience when rebuilding after disasters with federal funds - including developing a process for managed relocations of communities which face ongoing and significant risks due to climate change.

Putting community first

Communities suffering due to climate change must be at the heart of all emergency and disaster prevention, preparation, response and recovery plans and arrangements. Governments at all levels – Australian, state and territory and local – must significantly increase funding that reduces risk and builds community resilience, improves infrastructure, and increases the capabilities of emergency response and recovery agencies, with a greater focus on planning and coordination between all levels of government.

The Community First Responder program from the 2022 Independent NSW Flood Inquiry, is a practical example of what this can look like. Programs like this should be funded equally by federal and state governments, and rolled out at pace in at-risk communities.

Recommendation 14

The Australian Government develop and fund programs which build community resilience to extreme weather and disasters, using examples such as Community First Responder programs as a basis.

6. Strengthening Australia's climate science capability

> "Investments in Australia's climate science capabilities will be key to achieving the best possible outcomes for Australia in this changing climate" - Dr Katherine Woodthorpe, Chair of the National Climate Science Advisory Committee, 20 July 2019.

Governments, farmers and businesses rely on climate change information from universities and agencies such as CSIRO and the Bureau of Meteorology to make countless important decisions. Without such knowledge there is an increased likelihood that more lives will be lost and property damaged, and more funding misspent on ill-informed investments. Critically, in a rapidly changing climate where the nature of risks is constantly changing, ongoing research is required to continually improve our knowledge base. It is essential to understand and monitor how the climate is changing in order to ensure we understand the evolving nature and extent of the challenge facing Australia. Put simply, we can't accurately or effectively mitigate or adapt to climate change without the most up-to-date climate science.

The Federal Government has supported many climate science initiatives and these should be commended, for example:

- NESP Climate Systems Hub: funding started in 2021, till 2027; funding of about $35 million, https://nesp2climate.com.au/.
- Australian Climate Service: started in 2021, funding of $210 million over ten years, led by BoM, with Geoscience Aust, CSIRO and ABS, https://www.acs.gov.au/.
- The ARC Centre of Excellence for the Weather of the 21st Century: led by Monash University, plus four other universities, aims to determine how Australia's weather is being reshaped by climate change. Announced Nov 2022, funding $35 million over seven years, https://www.arc.gov.au/funding-research/discovery-linkage/linkage-program/arc-centres-excellence/arc-centre-excellence-weather-21st-century.
- The ARC Centre of Excellence for Climate Extremes, funding for 2023 and 2024, https://climateextremes.org.au/about-us/.
- The Australian Earth-System Simulator (ACCESS-NRI), https://www.access-nri.org.au/.

However, there are other significant activities for which coordination funding is needed and was cut by the last Federal Government, for example:

- National Climate Change Adaptation Research Facility (NCCARF): funding has been cut, and now there is only small support from Griffith University. National coordination of climate change adaptation research is needed, to build on the climate change risk assessment;
- Next-generation regional climate projections for Australia;
- New climate change reporting activities on climate change risks allocated to the Climate Change Authority (CCA) in new Climate Change Act 2022 legislation, with increased staff allocated to CCA in the last budget update is welcomed. However, this operational climate change report needs to be coordinated between CCA, the Australian Climate Services (ACS), the Bureau of Meteorology and CSIRO, as well as all the states and territories;
- In the wake of the Black Summer bushfires past and current Federal Governments have invested in climate services. There may be some coordination between government agencies such as BoM and CSIRO but when also considering universities there is no funding allocated for coordination.

Research coordination and funding

Over the last 30 years, Australia has developed a world class climate science capability that is globally recognised for its contributions to scientific knowledge, and through the Intergovernmental Panel on Climate Change (IPCC) and other avenues, to public policy. Investments in the development of skills, research and operational infrastructure, and partnerships (like Australian Community Climate and Earth System Simulator (ACCESS), Centres of Excellence and our international collaborations) prepare us well for the challenges and opportunities of the future.

Sound governance, coordination and the efficient resourcing of contributing research agencies, programs and centres is integral to delivering useful climate science to decision makers and the public. Funding also needs to be sustainable and predictable as research needs are often complex and require long-term investments of time, financial and human resources and infrastructure. For large-scale and long-term climate research to be successful, interdependencies among programs supported by different agencies, portfolios and tiers of government need to be considered. From the public funding perspective, research has to be coordinated with investments directed towards the highest value research avenues so that national benefit

is maximised. From a research perspective, the system needs to be structured to minimise the amount of time and energy expended to secure funding and support from multiple sources (DEE 2019).

Recommendation 15

The Australian Government should commit commensurate and sustained funds and resources for climate research and research coordination in Australia.

Next-generation regional climate projections for Australia.

A nationally consistent understanding of projected climate changes and impacts across Australia is needed for business and government to assess and manage their risks. Information needs to be at spatial and temporal scales relevant for decision-making, and allow for continuous risk assessment for businesses who operate across state borders and jurisdictions (e.g. electricity transmission network companies) (Department of the Environment and Energy 2019).

Next-generation regional climate projections for Australia: This capability is needed for the Australian Climate Service (ACS) but not clearly funded in ACS. Some research on this is being done in NESP Climate Systems Hub, but funding to undertake the model simulations has not been committed. The last national climate projections for Australia was released in 2015 by CSIRO and BoM through CCiA, https://www.climatechangeinaustralia.gov.au/en/. The plan for Next-Gen regional climate projections was prepared by NESP ESCC Hub and provided to government in 2021 (https://nespclimate.com.au/australias-next-generation-of-climate-change-projections/) but it is needed in the ACS.

Recommendation 16

The Australian Government should commit to funding next-generation regional climate projections for Australia.

Basic science capabilities

The scale of basic science being funded now is declining. New PhDs and postdocs are encouraged to be more applied and businesses (consultancies, banks, reinsurers etc) are hiring climate scientists and so, in the long-term, capacity is dwindling in the government and university sectors. There is also scant resourcing in important areas, for example, on biospheric sinks where we do not currently have the capability to study the evolution of these sinks in a future climate. CAPABLE (The Community Atmosphere Biosphere Land Exchange (CABLE) model used for land-surface research) could do this but it requires funding and resourcing, including staffing.

Recommendation 17

The Australian Government should step up funding for basic science in universities and government agencies.

Climate modelling development

While there are many coupled Earth system models around the world, understanding and managing climate risks requires that we maintain a distinctly Australian modelling capability and focus. Australia's land and vegetation is unique, and only a model that captures key ecosystem processes can simulate some of the climate impacts that Australia will experience.

Many agencies and universities claim they are doing climate model development but the scale of this endeavour is limited, with some notable exceptions including ocean modelling, land modelling, and ocean biogeochemical modelling. Many areas of model development are seriously deficient. We are making slight improvements but not taking the models to the next level. Globally we are poor when it comes to model development.

We have moved forward with the National Environmental Science Program (NESP) hub because it requires collaboration and the stakeholder component is really strong but there is no space to do fundamental science and model development.

Recommendation 18

The Australian Government should commit to funding and resourcing improved climate modelling capability and model development.

International engagement and dependencies

As a report by the National Climate Science Advisory Committee (DEE 2019) notes:

Australia cannot go it alone on climate science. We are a significant investor in climate science and a major contributor to global science efforts, especially in the Southern Ocean, Antarctica and the Indian and Pacific Oceans. Our economy and research programs also receive significant benefits from the efforts of international agencies and research groups. The understanding we have now is built on decades of global collaboration between scientists and science agencies, and is reliant upon ongoing international investment and the sharing of knowledge, systems, tools and data. It is critical for Australia's future well-being and prosperity that these collaborations continue.

Australia's research efforts in our region allow us to contribute to global climate science and access vital data and information from other countries, including global climate model simulations undertaken by more than forty centres around the world through the Coupled Model Intercomparison Project. Without this shared information and capability we cannot understand and anticipate how climate change will affect our country and our weather. Our investments in Southern Ocean and Antarctica research are vital to maintaining this critical information capability. This is recognised through the Australian Antarctic Program Partnership and the Australian Antarctic Science Strategic Plan.

We need to ensure that key international collaborations are maintained and strengthened so that we can continue to contribute to and benefit from the global effort to understand climate. This needs support across all levels, from individual scientists, research agencies, and different levels of government. Funding to facilitate engagement and formally sustain Australia's involvement and contribution to key global programs, such as the World Climate Research Programme; the Global Climate Observing System (GCOS), Global Ocean Observing System (GOOS) and Tropical Pacific Observing System (TPOS), is in Australia's long-term strategic interests.

Recommendation 19

The Australian Government should commit to providing sustained funding to facilitate engagement and formally sustain Australia's involvement in, and contribution, to key global science programs.

Conclusion

Australia has much to gain from a rapid transition to clean, renewable energy; a transport system that prioritises moving people around efficiently and cleanly; and strong action to both mitigate and prepare for the risks which are already menacing Australians due to extreme weather fuelled by climate change.

After a decade of climate denial and policy delay, there is no time to lose. The Australian Government has taken welcome first steps to accelerate climate action. But current actions and investments will not be sufficient to cut emissions at the scale and pace now needed to avoid the worst impacts of harmful climate change.

In seeking to fund these new investments, Climate Council reiterates the importance of ensuring that all public spending is aligned with the urgent task of cutting emissions and addressing climate change. It is not tenable for governments to argue that there is no further fiscal capacity to act, while continuing to pour billions of dollars a year into fossil fuel subsidies and other investments which prolong the life of coal, oil and gas.

Australia's economy, and its budget, need genuine transformation to rise to the challenge of climate change. We urge the Australian Government to be bold, make hard decisions and remain focused on the importance of delivering a safe climate for today's Australians and those to come. Our future depends on it.

References and source material

Data, quotes and reference information cited in this submission has been drawn from a range of Climate Council publications. For detailed sources and background material please see:

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