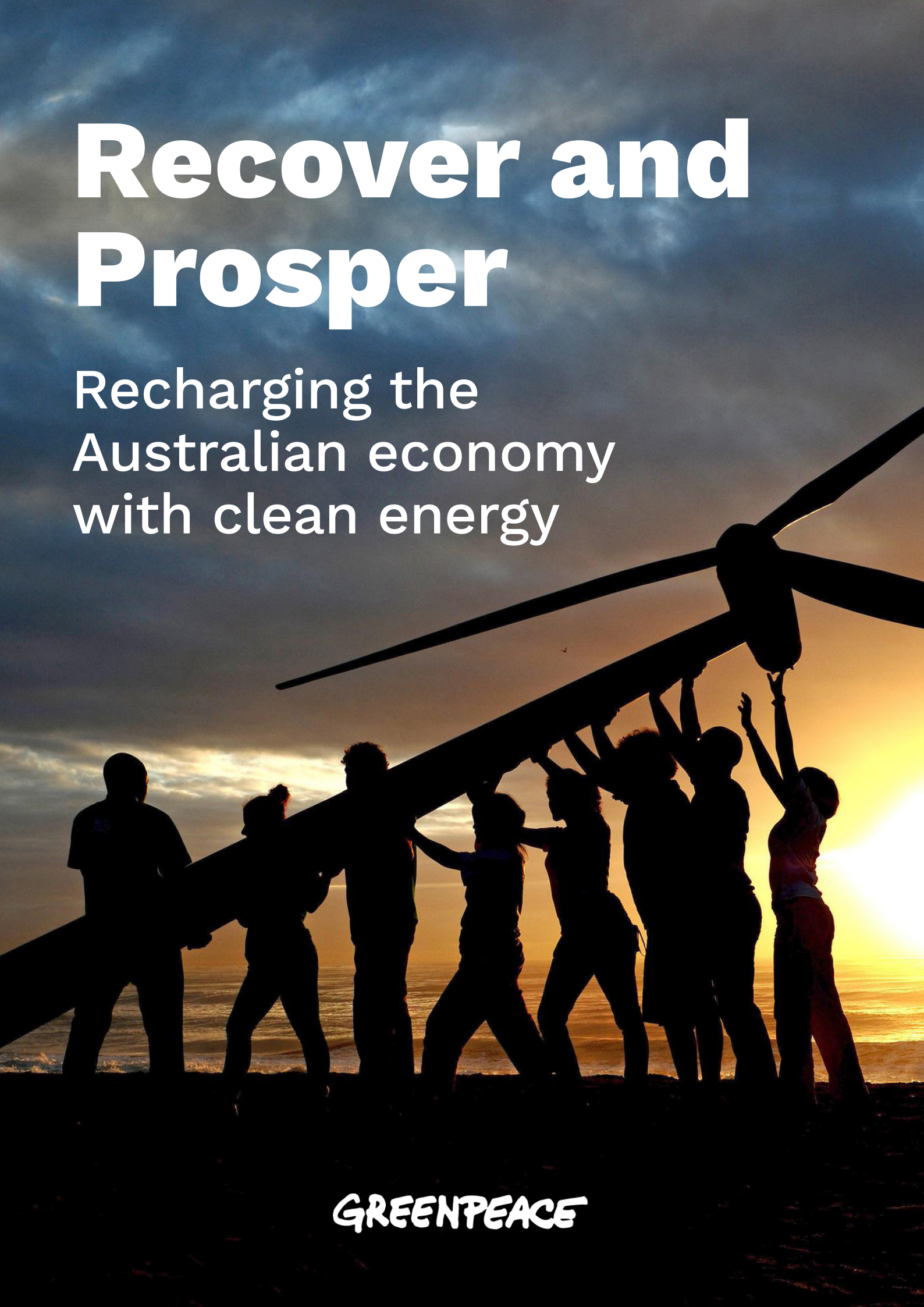
Recover and Prosper

Recharging the Australian economy with clean energy



GREENPEACE

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Introduction

The economic crisis in which we find ourselves, borne of an unprecedented health emergency in Covid-19, arrived at a time when Australia and our region was already reeling from an unprecedented climate crisis. The response from government and society must be bold and tackle these twin challenges as one. It must be delivered in such a way as to keep as many people as possible healthy, safe, and certain of their future, starting with the most vulnerable. That means safeguarding our planet as well.

Just like the climate crisis, which embodied the past black summer of fires, floods and drought, Covid-19 is proving that we rely far more on community cooperation, public services, and good government, than we do corporations. We are a wealthy country, blessed with a rich and unique yet fragile and damaged land that we must restore and protect against future climate damage.

The good news is the opportunity to address the economic impacts of covid-19 and climate change simultaneously are unprecedented. It is vital that we seize these opportunities while we still can as the costs of failing to act on climate change now will be long lasting and extreme. Failure would not only increase the climate damage we are already suffering, it would be a missed opportunity to modernise our economy and see us fall further behind the world's most socially, technologically, and economically advanced nations.

Australia is getting through this crisis better than most. Our country's response has given us a taste of what is possible when governments consider the welfare of people before big profits. Australian resourcefulness and ingenuity as well as values like cooperation and care for each other are what will lead us to the other side and ensure we build back more strongly than before.

Tackling climate change and Covid-19 together is the only sound economic choice

The financial downturn as a result of Covid-19 will last for years, and government efforts to guide the recovery will need to consider the long-term economic future of the nation. Governments must provide the jobs and support which the community will need in the immediate aftermath, but failing to consider the decades ahead risks making future crises worse and would be a missed opportunity to emerge from the crisis on a trajectory toward greater prosperity than we entered into it with.

The climate crisis will be even more protracted and, over time, an even more significant threat to health and the economy than Covid-19 - the death toll from the 2019-2020 Australian bushfires alone was over 400.[1] The policy and economic settings, including fiscal stimulus, need to be of a sufficient scale to meet the challenges we face. They must also be:

- **timely**, but not hasty;
- **targeted** at those who need it most - the lowest income households and the regions most affected by the climate change impacts of drought, fire and shifting energy markets; and
- **transitional**, helping Australia take maximum advantage of the opportunities on offer as the world moves away from fossil fuels, while limiting the risk of betting our national wellbeing on declining industries.[2]

Following the 2008 global financial crisis (GFC), stimulus interventions globally were skewed disproportionately not only to the wealthy, but to carbon-intensive industries.[3] That's a mistake we can't afford to repeat. Acknowledging that climate change represents a social and economic risk,[4] the response to Covid-19 must be designed to look after people first and foremost, dramatically reduce greenhouse gas emissions to slow global temperature rise, take advantage of the economic opportunities on offer in a decarbonising world and prepare us for a climate changed future.

A ‘green’ recovery is the global standard

Government spending can help create the jobs of the future while fostering real resilience to the impacts of climate change, and maximise Australia’s opportunity to capitalise on the global clean energy transition. Research conducted by Nobel laureate Joseph Stiglitz and Sir Nicholas Stern[5] analysing stimulus spending across 53 countries, including every G20 economy, found that **‘green’ policies and spending programs have advantages over neutral or fossil fuel-oriented packages beyond the improvements to climate and ecosystems.** For example:

- **Renewable investment** is attractive in both the short and long term;
- **Renewable energy projects** deliver more jobs in the short term because during a recession jobs are scarce, but in the longer term labour is freed up when the economy returns to capacity;
- **Natural capital projects** are effective because worker training requirements are low, approvals can be swift, and the work is suited to social distancing.

The authors provide evidence that, **for every $1 million in spending, the returns are 7.49 full-time jobs in renewable infrastructure and 7.72 in energy efficiency, compared with just 2.49 for spending on fossil fuel projects.**

The World Bank advises that economic recovery ‘can help **build prosperity and resilience**, by contributing to the long-term potential and sustainability of a country’s development pathway’, where policies deliver on long-term growth potential, resilience to future shocks, and a decarbonisation and sustainable growth trajectory. To achieve these goals, policies should invest in human and physical capital, alleviate air and water pollution, reduce the future risk from climate impacts and natural disasters, and facilitate renewable energy and electrified transport. They should **avoid imposing stranded asset costs on the economy from investment or distorting subsidisation of declining technologies.**[6]

Fatih Birol, Executive Director of the International Energy Agency, has called for ‘large-scale investment to boost the development, deployment and integration of clean energy technologies’[7] to meet economic and climate goals. The IEA’s ‘Sustainable Recovery’ flagship report states that: “energy efficiency in buildings and industry together with solar PV create the most jobs per million dollars of investment: on average, these three measures create between 10-15 jobs for every million dollars.”[8] The IEA has also made clear the low oil price means the time is ripe to lower or remove subsidies for fossil fuels.

Home support for a clean energy transition

In Australia the calls for a green recovery have come from a broad range of economic and business voices, from the big four banks and our largest insurers[9] to the nation's most senior economist. The Australian Sustainable Finance Initiative, made up of Australia's biggest banks and insurers, issued a detailed statement on the required shape of the recovery:

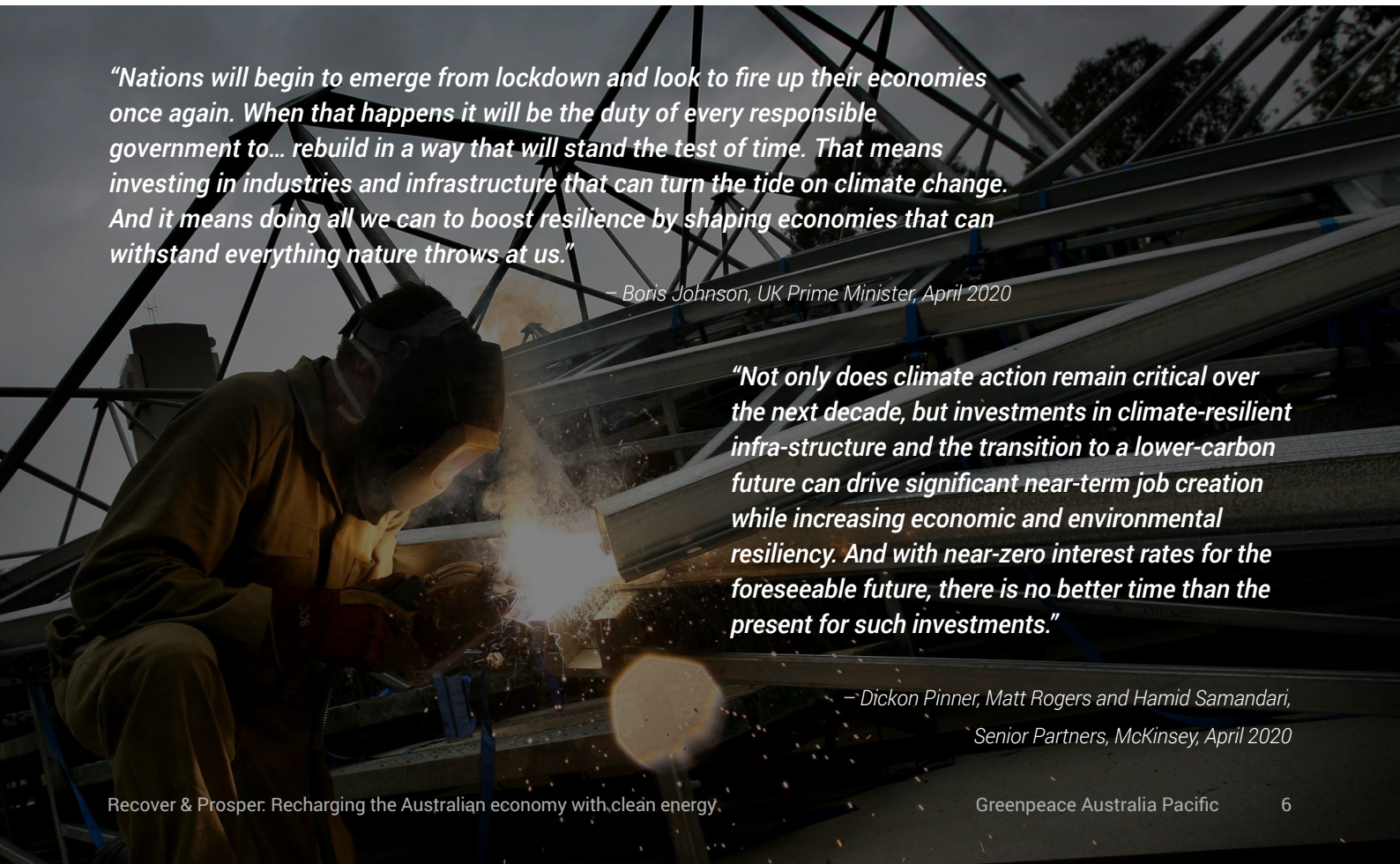
"The Australian finance sector recognizes that a failure to fully consider the risks posed by climate change, as well as a failure to act to deliver on our commitments under the UN Sustainable Development Goals, will only exacerbate the economic cost of any crisis."

- The Australian Sustainable Finance Initiative

Reserve Bank governor Philip Lowe has called this a 'once in a century' crisis and warned that not only should fiscal stimulus policies be extended to counter the looming recession[10], they should also steer the economy towards clean energy.[11]

The policy work to implement those principles has been done. A plan developed by the Grattan Institute, taking account of Australia's inherent renewable energy advantages, could see Australia capture up to 6.5% of the global steel market, or $65 billion in annual export revenue, by developing a 'green steel' refining industry. The same research outlines opportunities in other energy-intensive sectors with employment opportunities heavily favouring regions like central Queensland and the Hunter Valley which currently have a high proportion of carbon-intensive employment.[12]

Modelling by Ernst & Young shows that 100,000 jobs can be created through renewable energy and battery projects, electric bus manufacturing, hydrogen, and grid modernisation. An additional 60,000 long term regional jobs could be created by transitioning the electricity grid to 50% renewables. And a $700 billion USD per year export industry supplying 24% of the world's energy needs would be possible if Australia took full advantage of the hydrogen opportunity.[13] As with the global assessments referenced above, Ernst & Young found that stimulus investment in renewable energy could deliver three times as many jobs as an equivalent investment in fossil fuels.



"Nations will begin to emerge from lockdown and look to fire up their economies once again. When that happens it will be the duty of every responsible government to… rebuild in a way that will stand the test of time. That means investing in industries and infrastructure that can turn the tide on climate change. And it means doing all we can to boost resilience by shaping economies that can withstand everything nature throws at us."

– Boris Johnson, UK Prime Minister, April 2020

"Not only does climate action remain critical over the next decade, but investments in climate-resilient infra-structure and the transition to a lower-carbon future can drive significant near-term job creation while increasing economic and environmental resiliency. And with near-zero interest rates for the foreseeable future, there is no better time than the present for such investments."

– Dickon Pinner, Matt Rogers and Hamid Samandari, Senior Partners, McKinsey, April 2020

Business-as-usual promises economic and ecological ruin

Trade risk and potential decline of geopolitical Influence

Tying Australia's recovery to fossil fuels now will lock us into a high emissions economy for decades to come, alienating us from the rest of the OECD and global trade partners. By favouring low-value, high emissions commodities like coal and gas we will burden future generations with a rapid decline in economic prosperity.

It is likely that within the next decade we will see the beginnings of emissions-related trade sanctions. Late last year the Australian government was singled out by EU leaders for its position on Paris treaty climate negotiations amid threats of climate tariffs associated with proposed trade deals.[14] Neglecting the opportunity to transition to renewable energy at a time when it is most economically efficient not only locks us into a declining economy but will likely impact our trading opportunities as well.

Economic Resilience, Investment and Access to Capital

In the context of accelerating divestment from high emissions sectors it is important that governments work towards transitioning industry away from declining industries such as coal, oil and gas.[15] [16]

The Global Commission on Policy and Climate estimated the opportunities of taking action on climate could unlock $26 trillion USD economic gain between now and 2030[17] and Goldman Sachs has announced that 2021 will see its renewable energy spending outstrip that of fossil fuels.[18] Even with the low cost of capital, an attractive regulatory framework is vital for renewable resources rich countries like Australia to benefit from the accelerating transition to renewable energy.

Exacerbating climate damage

The response to Covid-19 must above all not do further damage.

The government's response to economic recovery must not include financial incentives, subsidies, bail-outs or enabling policy measures leading to further expansion of exploration, extraction, or consumption of coal, oil, or gas.

This sector has already been benefiting from public resources for decades and business-as-usual is delivering a net cost to the economy, people's lives, the climate, and our environment.

From an emissions point of view, the recovery from the 2008 GFC was energy and carbon intensive. Although carbon dioxide (CO2) emissions declined by 400 million tonnes in 2009, globally they rebounded by 1.7 billion tonnes in 2010,[19] the sharpest upswing in history. We cannot afford to make the same mistakes again.

Australia and the Pacific are at the sharp end of climate damage - from bushfires, floods, and drought, to sea level rise and bleaching of the Great Barrier Reef.

Last summer's bushfires burnt 19.4 million hectares of land across Australia leading to 35 tragic deaths of people from fire and over 400 more from smoke exposure.[20] Over a billion animals perished. According to research by the World Weather Attribution Network, fire danger conditions were made four times more severe by human-caused climate change, and further unchecked greenhouse pollution will multiply fire risk unless urgent action is taken now.

The main drivers of species loss are well known and include habitat clearing, invasive species, disease, pollution and over-exploitation. These drivers, coupled with longer and hotter seasons as a consequence of climate change, will continue to have catastrophic impacts on the state of the environment in Australia. Inadequate and failed environmental governance remains one of the top threats to species in Australia.[21]

As one of the countries most affected by the impacts of climate change and with the most opportunities to harness the benefits of a clean energy future, Australia can and must move from being a laggard to a leader on climate change.

It is essential that the Covid-19 recovery plan responds to the climate crisis by leading to rapid decarbonisation of the Australian economy and restoration of the land. To fail to achieve that would be simply to do more harm.

The National Covid-19 Coordination Commission (NCCC) is steering us toward a climate and economic disaster

Despite the unprecedented opportunity for a renewables-led pathway to jobs and prosperity that also delivers on energy and climate security, the Federal Government has appointed a group of largely fossil fuel executives to guide the economic recovery. The NCCC sits within the Department of Prime Minister and Cabinet to advise on the recovery plan, and includes gas executive Neville Power as chair, EnergyAustralia CEO Catherine Tanna (whose company owns the most polluting coal-burning power station in the country and has a significant stake in the controversial proposed Narrabri coal seam gas project), and Saudi Aramco director Andrew Liveris. Aramco is the world's largest greenhouse gas emitter and was party to the deliberate oversupply of oil that exacerbated the economic contraction following the public health protections implemented to protect the public from the risks of Covid-19.

The NCCC members have advocated a gas-led recovery featuring continent-wide gas pipelines, removing environmental protections, creating artificial demand for petrochemicals to support otherwise uneconomic gas projects, and other measures that would expand gas production at the expense of clean technology.

Installing CEOs and company directors within the Prime Minister's office to draft policy is a risk to democracy and to a flourishing recovery. The NCCC urgently needs to be replaced with a body that is equipped to meet the multiple challenges we face as a nation.

The fossil gas fallacy

Fossil gas contributes significantly, and with a growing share, to the climate crisis. Considering the industry's worsening greenhouse gas emissions, the availability of alternatives to gas, and the emission lock-in effect and stranded asset risk of new gas infrastructure, the oil and gas industry's 'gas as a bridging fuel' marketing myth has been debunked. Any new investments in fossil gas consumption or production are inconsistent with a 1.5C carbon budget, the protection of fragile ecosystems, the prosperity of current and future generations, and the rights of Indigenous Peoples and local communities. Pursuing the concept of a 'gas-led recovery' would deliver economic as well as environmental ruin.

Why a gas-led recovery would be an economic and environmental disaster

1 **Burning known global oil and gas reserves, even without coal, would make 1.5C impossible[22]:**

Burning **existing proven and probable gas reserves alone would lead to 173 gigatonnes of greenhouse gas emissions, nearly half of the remaining post-2015 carbon budget** for remaining below 1.5C with 50% probability. In fact **to meet the IPCC's most realistic pathway to 1.5C would require a reduction of not less than 39% in fossil gas consumption** between 2018 and 2030[23].

2 **Gas may be as polluting as coal:**

Taking into account the greenhouse gas emissions associated with extracting, producing, and transporting gas to consumers, scientists are now concluding that **across the entire lifecycle gas may be as polluting as coal, if not more[24].** Not only is the process of liquefying and transporting gas energy intensive but the amount of methane, a greenhouse gas 86 times more potent than CO2 in the short term[25], routinely leaking from gas infrastructure has been severely underestimated[26].

3 **Investors are already overexposed to gas:**

Investing in new gas projects now will either lead to assets becoming stranded as global efforts to curb emissions gain momentum or they will cause climate action to fail, thereby contributing to the increased costs of climate damage. As of 2019 **almost $5 trillion USD of investments have already been committed to new oil and gas fields that are incompatible with limiting warming to 1.5C[27].**

4 **Renewables are cheaper than gas:** Since 2016, gas has been driving up energy prices for Australian households and businesses[28]. According to the CSIRO[29], Lazard[30], and Bloomberg's levelized cost of energy analyses, **solar and wind have been the cheapest power generation technologies for new capacities in most major economies for some time** and are now even competitive with installed coal.

5 **Fossil gas is not needed for grid reliability:**

Storage solutions and demand response technology are becoming competitive with gas peaker plants for balancing electricity grids. AEMO's most recent draft Integrated System Plan shows no need for significant gas expansion in any scenario[31]. And according to Wood MacKenzie batteries could soon replace all gas peakers[32]. Electrifying transport and buildings is expected to further help meet grid reliability expectations.

6 **New fossil gas infrastructure would lock in emission increases for decades:**

Global gas production plans already in train are set to exceed the global carbon budget for 1.5C by 70%[33]. Approximately half of the existing fossil gas fleet was built after 2000. New fossil gas plants and infrastructure being built are either likely to operate and emit greenhouse gases for decades, shattering the earth's carbon budget, or become stranded assets.

4 pillars for a prosperous recovery

Position Australia as a Renewable Energy Superpower

The global transition to clean energy is unstoppable but how that transition occurs, and who benefits most, is still up for grabs. Australia has the potential to be a world leader in renewable energy and the technologies that go with it. Not only can we power the country, but we can also produce enough to export renewable energy, knowledge, and components to our region. By favouring and incentivising locally manufactured components and services as we build capacity we can generate a jobs boom that will carry us out of the crisis in better shape than we entered it.

Transition Out of Polluting Industries

Australia emits more carbon pollution per capita than almost any other nation and our record of resistance to global action or to curtail our own involvement in the practices that are known to do more damage puts us at odds with the international community. Our response to Covid-19 must above all not do further damage by expanding or propping up fossil fuel industries. This sector has been benefiting from public resources for decades and business-as-usual is delivering a net cost to the economy, people's lives, the climate, and our environment. Continuing to do favours for polluters risks burdening the country with the risk of stranded assets and insurmountable climate losses.

Make People's Lives Better

Our first obligation as a society is to keep people healthy, safe, and sheltered. But this is also an opportunity to equalise our economy and society, rejuvenate our cities and regions, and lift people out of poverty, including energy poverty. Making our cities more liveable and our regions more connected will raise Australia's wellbeing levels, improve productivity, and deliver beneficial health and environment outcomes.

Restore and Conserve Nature

This is a beautiful and harsh land, one of the driest and hottest, with unparalleled unique biodiversity and the oldest continuous living culture on the planet. Australia's natural environment is imprinted into who we are as a nation and it continues to shape our identity. Climate change and colonisation have damaged Australia's landscapes over centuries - fires, drought, floods, and sea-level rise have put many of us, especially Aboriginal, and Torres-Strait Islander people on the frontline of climate damage. Restoring damaged ecosystems will not only help bring threatened species from the brink of extinction, it will trap and absorb carbon as well as make our land more productive and more resilient to climate change thereby benefiting the health and prosperity of our country and its people.

Position Australia as a Renewable Energy Superpower

1. Increase the funding and protect the renewable energy mandate of ARENA and the Clean Energy Finance Corporation (CEFC)

Maintaining the integrity of the Australian Renewable Energy Agency (ARENA) and the CEFC and increasing their funding is a vital step for any government to hasten our transition to renewable energy and encourage investment and jobs in innovative new industries. Ernst and Young's 2019 evaluation of ARENA's impact and effectiveness [34]shows that the institution has consistently outperformed on almost every indicator.

We call on governments to:

- ✓ Protect ARENA and the CEFC's original investment mandate. Do not compromise their renewable clean energy investment remit or their prohibition on financing carbon capture and storage (CCS) or nuclear power.
- ✓ Expand ARENA's funding to a minimum of $5 billion over 10 years to stimulate further development, demonstration and commercial readiness of new renewable energy technologies.
- ✓ Re-establish and re-fund the Clean Technology Investment Program focused on pursuing much higher levels of energy efficiency, renewable energy and innovative clean technologies.
- ✓ Fund research and development, and develop a legislative framework to support large scale wind energy generation.

2. Fast-track Australia's electricity transmission infrastructure so all Australians have access to low cost, reliable clean energy

Electricity transmission is failing to keep pace with the growth of renewable energy. Major bottlenecks caused by sluggish regulatory approval processes and funding barriers are preventing large-scale renewable energy investment and stopping newly built projects from gaining full access to the electricity grid. Governments should:

- ✓ Fund and bring forward implementation of the Integrated Systems Plan (ISP).
- ✓ Fund and develop additional renewable energy zones in every state.
- ✓ Increase funding to the Grid Reliability Fund and re-dedicate the fund to its core purpose, which includes supporting transmission infrastructure. Or, create a new National Clean Energy Transmission Fund dedicated to this purpose.
- ✓ Fund the Marinus Link project to unlock new renewable energy generation and storage in Tasmania, lower prices and increase reliability in the National Electricity Market.

3. Underwrite and support new renewable export industries

Ensuring Australia not only generates all of its energy needs from renewable sources but takes advantage of the opportunity to capture a leading position in an expanding global export market will help drive another export boom and ensure workers and regions at risk from a decarbonising economy secure long-term economic security.

- ✓ Help Australian steel-making move to lower-emissions technologies by funding green steel 'flagship' projects in the Hunter and Central Queensland. This would underpin investment in lower-emissions technologies and build the skills and capabilities Australia will need to create an export-scale green steel industry, while transitioning workers affected by the inevitable decline of coal markets.
- ✓ Give funding support to renewable hydrogen projects
- ✓ Support and give state significant development status to at least one multi-gigawatt renewable energy generation for export project.
- ✓ Establish a new manufacturing industry by building electric buses here and selling them across the world. A $240 million government investment would fast-track the revolution and help to double our current bus manufacturing workforce from 10,000 to 20,000.[35]

4. Don't delay energy market reform

Our National Electricity Market (NEM) is in major need of reform. It combines the worst aspects of various approaches in the one, dysfunctional system. Coal generators are pushing to delay significant reforms that would make the NEM more reliable and efficient and help lower emissions. We oppose proposed delays to energy market reforms, including the determination on 'Five Minute Settlement' which is an important market reform that would provide a better price signal for investment in fast response technologies, such as batteries and demand response.

Liddell power station will retire in 2023 and Yallourn may close early, so we must urgently redesign the market to work well with renewables. Delaying reform now would be a major setback for Australia and the essential energy transition that our market is going through.[36]

5. Develop a clear and comprehensive climate policy to drive provide business certainty, reduce climate risk, and increase investment in a pollution free economy

Hundreds of scientific reports continue to tell us that developed countries like Australia must achieve net zero climate pollution before 2050 to avoid truly catastrophic climate impacts that come with exceeding 1.5 degrees of global warming. All states and territories in Australia have committed to this long-term target and have efforts underway to achieve it. The government to lead the way with national policy settings that create a critical roadmap to get Australia to net zero climate pollution well before 2050.

Influential global institutions are consistently reporting unprecedented shifts in the global market away from fossil fuels and towards renewable energy but the resounding call is that while these technologies consistently outperform their antiquated predecessors, policy certainty is essential.[37] A realistic roadmap that brings us to net zero before

2050 without relying on polluting sectors like gas or ineffective (and expensive) carbon capture and storage will enable business and industry to confidently invest in a zero carbon future, helping to rebuild our economy and create clean jobs for Australians as our country and our economy recovers from the shocks of Covid-19.

Any credible response to climate change must drive economy-wide action, be guided by science, drive transformation and respect the principles of ecologically sustainable development, including intergenerational equity and valuation. Baselines should be fixed in time to ensure companies that fail to meet their targets are not rewarded or let off the hook for inaction.

Transition out of polluting industries

6. Increase funds for investments in sustainable industries by reallocating fossil fuel subsidies

Creating a safe and healthy future requires the federal government to dramatically increase its investments in initiatives that enable industries to reduce pollution and regenerate nature. This should be funded by reforming the Fuel Tax Credit Scheme (FTCS), and removing tax concessions, concessional loans, direct investments and other fossil fuel subsidies.

Eliminate the availability of fuel tax credits for companies engaged in the extraction of production of fossil fuels and restructure the remaining FTCS to cap the claimable value of the Fuel Tax Credits at $20,000 per year. This measure would make billions available for economic stimulus measures while protecting small claim users, such as the agricultural and tourism claimants, from being adversely affected.[38]

7. Mine site and petroleum well rehabilitation and removal

There are thousands of abandoned or soon-to-be-abandoned mines and offshore oil and gas operations with insufficient rehabilitation financial assurances across the country. The drop in oil price will also likely bring forward the decommissioning rate of offshore oil and gas infrastructure. By ensuring that financial assurances cover the costs of rehabilitation and removal, we can avoid the risk of the liability being transferred to the government, while creating thousands of ready-made jobs for people working in industries facing structural change. Strengthening the requirement for complete removal of oil and gas infrastructure, funded by title holders, offers significant employment and circular economy opportunities by providing feed stock for steel recycling.

8. Avoid reclassifying polluting profit-driven industries as essential services

Essential services are those that support the health and wellbeing of citizens and allow society to function. Resource extraction for export and profit is not essential. In the event of further lockdowns, exclude extractive and polluting industries (logging, mining, fossil fuel and mineral extraction) from consideration as “essential sectors” and support workers in those industries.

9. No bailouts for polluters

Permit no financial incentives, subsidies, bail-outs or enabling policy measures allowing for, or leading to, further expansion of fossil fuel exploration and extraction. Those sectors have already been benefiting from public resources for decades and further expansion risks imposing stranded asset costs on the economy from investment or distorting subsidisation of declining technologies while exacerbating the costs of climate change.

10. Fund a transition for carbon workers

Australia must prioritise an economic adjustment fund to ensure workers unemployed or in sectors impacted by the transition to renewable energy see their income and social protection maintained, have access to retraining and other employment options in their communities, and have a voice in the future they want to build.

Make people's lives better

Our first obligation must be to keep people healthy, safe, and sheltered right now. But this is also an opportunity to equalise our economy and society, rejuvenate our cities, and lift people out of poverty, including energy poverty.

We know that a majority of Australians understand that a clean energy future will create a better life for everyone. That by upgrading our energy system we can reduce damage to our climate and ensure cleaner air, better lifestyles, and cheaper energy bills.

11. Fund urban renewal, making cities greener, more accessible, and more pedestrian-friendly

More resilient cities will be able to fight, mitigate and adapt to emergency situations by advancing local policy demands connected with global struggles, in a way that impacts regional, national and global agendas.

- ✓ **Greener transport:** Cities should be made for people, not for cars. Let's use this opportunity to redesign mobility in cities, to expand bike lanes, to make walking safer and to build better trains and bus systems. We need safe, affordable and sustainable ways to get around our cities that don't involve cars.
- ✓ **Greener food:** When lockdowns began in many cities, people worried that there might not be enough food for everyone. Our cities have become very fragile, especially in times of crisis, with rising food insecurity and inequality.
- ✓ **Green spaces:** The demand for urban green areas is increasing, as a growing body of research links parks and green spaces to wellbeing. The WHO suggests[39] that people should live no more than 300 meters away from a green space. But in many cities, parks and other green spaces are still regarded as a luxury, only available to the privileged few.

12. Upgrade Australia's building stock for energy efficiency and climate resilience

Job creation opportunities from building stock retrofits and upgrades offer the highest returns of all government spending programs according to the IEA[40]. Governments, with the bulk of funding coming from the federal budget, should upgrade all publicly-owned buildings and operations – such as hospitals, evacuation centres, fire stations, schools, jails, public and social housing, and libraries – so they are renewable and energy efficient and bringing Australia's inefficient housing stock up to global standards. This will create jobs in the construction sector, boost productivity, reduce grid pressure, and support both large and small scale renewable energy projects, while cutting electricity costs and reducing climate emissions. Job creation opportunities include:

- ✓ Installing solar PV and batteries on all public schools and public and social housing, with a priority to essential service buildings such as hospitals, evacuation centres and fire stations.
- ✓ Undertake an assessment of housing stock and invest in energy efficiency upgrades or replacement of social housing, Aboriginal and Community housing, and homes in bushfire-affected regions.
- ✓ Subsidise retrofit programs, upgrading houses across Australia for thermal comfort, efficiency and response (through sealing, insulation, glazing, shading, aircon upgrades, smart meters, solar, batteries, EV charger provisioning or installation).

13. Expand electric, public and active transport investment and manufacturing

Increased availability and use of public and active transport can greatly reduce traffic congestion in urban areas, improve public health, reduce toxic and greenhouse emissions, and improve local amenity. Electrifying transport removes dangerous pollution from the transport sector, which is one of Australia's fastest growing sectors for greenhouse pollution. Electric vehicles (EVs) also provide battery storage that can help stabilise our electricity grid as Australia transitions to renewable energy. Governments should:

- ✓ Reallocate funding from motorways to public and active transport infrastructure, including electrification of all public transportation systems and expansion and modernisation of metropolitan and intercity rail.
- ✓ Commit to transition diesel bus fleets to electric, starting with school buses. Use locally made vehicles to support this budding manufacturing industry.
- ✓ Establish an annual federal cycling infrastructure fund to support state and local government to facilitate a shift to clean, healthy transport, and relieve productivity-sapping congestion.
- ✓ Set government EV fleet targets preferencing Australian manufactured vehicles, provide federal support for public, not-for-profit, and business EV purchase especially to primary producers, and support Australian-made EV and battery manufacturing.

14. Deliver a residential and business solar battery storage program

The federal government should create immediate-term local jobs and assist people facing financial difficulty by establishing a federal grant program for households and businesses to purchase solar batteries. As well as creating local jobs, this will incentivise local battery manufacturing and assembly.

Modelling by Ernst & Young in WWF's 'Securing Australia's Future: Renewable Recovery from Covid-19' report, shows that a $500 million government investment would deliver the biggest solar roll-out Australia has ever seen, and would create up to 5,000 jobs and cut the cost of energy for thousands of schools, hospitals, country fire stations and Indigenous communities right across Australia.[41]

Restore and Conserve Nature

Nature is declining globally at rates unprecedented in human history. We can't afford to let this happen again. Rising pollution and the destruction of natural habitat continues to threaten human health and the natural systems we depend on for life. Without a healthy environment, we cannot have healthy, resilient communities or a strong economy. We can have all of these by protecting nature, or none of them if we destroy it.

15. Create jobs in landscape management and restoration in urban, suburban and regional areas

A coordinated state and federal investment in conservation and land management can help to create meaningful jobs and support long term environment outcomes. Programs across urban, suburban and regional areas should include:

- ✓ Supporting conservation and land management organisations to directly employ staff to implement key restoration and land management activities.
- ✓ Providing funding for Indigenous rangers jobs directly to vulnerable communities using a proven model.
- ✓ Supporting coastal and marine tourism operators to undertake key monitoring and management activities.
- ✓ Supporting the heavily impacted university and research sector to supercharge scientific monitoring efforts.

This will deliver a strategic response to both the devastating impacts of the catastrophic 2019-20 bushfires and support economic recovery. It is critical investments contribute to meaningful and long-term environmental outcomes, including:

- ✓ Undertaking high priority habitat restoration and management activities in bushfire affected regions as well as in metropolitan, suburban, peri-urban and regionals areas
- ✓ Protecting sites of national and international importance, such as World Heritage Areas, internationally protected wetlands and culturally significant places

16. Establish a National Environmental fund to support long term nature protection, and wildlife and ecosystem recovery

The federal government should establish a $4.5 billion National Environmental fund, independently administered, to support the long-term protection and recovery of wildlife and ecosystems across Australia. This fund would support the delivery of outcomes at multiple scales, including:

- ✓ Deliver landscape scale ecosystem investments in natural infrastructure, including improving water catchments, coastal buffer zones and investing in urban canopy programs to improve health and biodiversity outcomes
- ✓ Assist with bushfire recovery activities - including revegetation and built asset reconstruction across Australia's national reserve system
- ✓ Provide incentive payments to land managers, including Indigenous communities and farmers, to deliver conservation outcomes on their properties
- ✓ Support the direct implementation of recovery and threat abatement plans

The fund would also be used to leverage private investments in conservation, including through supporting markets that reward sustainable, ethical and responsible production

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17. Create strong environment protection laws to support responsible economic prosperity

We call on the federal government to introduce a new generation of strong national laws and institutions to protect our rivers, reefs, forests and wildlife, increase biodiversity and regulate pollution. This will ensure every policy and funding decision now and in years to come sets Australia on the right path towards a future where we don't just survive, but thrive. A new nature protection framework will guarantee environmental decisions are transparent and hold decision makers and corporations to account when they fail to meet their obligations.
This new legal framework must:

- ✓ Ensure federal government leadership on the protection of the environment, including through the development of national level environmental goals, plans and standards
- ✓ Expand national regulatory oversight to key environmental matters, such as climate change, air pollution, key biodiversity areas and nationally important wetlands, whilst maintaining existing provisions, including the ban on a dangerous nuclear energy industry
- ✓ Ensure the protection of critical habitats for biodiversity and the mandatory implementation of recovery and threat abatement plans
- ✓ Create an independent national Environmental Protection Authority to conduct transparent environmental assessments and inquiries as well as undertake monitoring, compliance and enforcement actions
- ✓ Guarantee communities the right to have a say in environmental decisions and to hold regulators to account
- ✓ Establish an independent commission to set environmental standards, develop national environmental plans and monitor the health of our natural environment.

End Notes

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