**My policy wish list for Australia’s response to climate change**

Timing is everything.

As of 2020, scientists estimate that emissions must remain less than 400 gigatonnes of greenhouse gases measured in carbon dioxide equivalent (GtCO2e) to keep global average surface temperature within 1.5°C of preindustrial levels (Rogelj et al. 2019).[[1]](#footnote-1) Allowing cumulative emissions to reach 1000 GtCO2, the limit estimated to correspond with a 2°C temperature rise, is likely to have far more devastating consequences (IPCC (2018). Continuing business-as-usual adds 40 GtCO2 to the atmosphere each year, reaching these limits in 10-25 years (400/40=10; 1000/40=25).

Annual emissions must reach net zero for the global climate to stop warming. If human activity can emulate natural carbon systems, removing more emissions from the atmosphere than we emit, we can begin to reverse this climate chaos. It takes time to reduce emissions. The UNEP Emissions Gap Report (2019) estimates that emissions reductions of at least 7.3% per year are required to keep warming within 1.5°C.

Given the devastating impact of a 1°C rise on our country, people, animals and land, which has corresponded with the accumulation of 2,300 GtCO2 in the atmosphere since the Industrial Revolution, the Government should see clearly that it is the interests of the Australian people to keep temperatures from rising above 1.5°C.

Comprehensive modelling of climate solutions indicates the diversity avenues for emissions reduction—from technological to behavioural—that are already available for implementation and are economically viable. Models show that climate solutions save more money than they cost (Hawken 2017).[[2]](#footnote-2) Yet these solutions are not going to be implemented fast enough by market forces—they need to be facilitated and incentivised by the world’s leaders and governments.

Attached are twelve proposals for consideration. These are:

1. Set targets to halve annual emissions by 2030 and reach net zero emissions by 2040
2. Re-focus the economy on improving human and planetary wellbeing rather than GDP growth
3. Transition to net zero emissions energy sources
4. Transition to net zero emissions construction and buildings
5. Transition to net zero emissions manufacturing and consumption
6. Transition to net zero emissions transport
7. Protect, restore and manage of bushlands, forests, wildlife, biodiversity and ecosystems
8. Transition to sustainable agriculture and farming
9. Family planning programmes, empowerment of women and reduce inequality
10. Incentivise the market toward net zero- emission production and consumption e.g. carbon tax
11. Use Government contracts to incentivise shifts by giving preference to businesses committed to net zero emissions targets
12. Education, research and implementation of the above and other climate solutions.

The overarching vision is of a transition to zero emission energy sources and electricity, transportation, agriculture, manufacturing, consumption and land use. It involves a shift in education, economics, culture and behaviour.

To secure a sustainable future, decision-making at multiple levels must put the long-term wellbeing of people and the planet, before short-term monetary gains. It is pivotal that Government initiate, support and fund these changes.

1. Set targets to halve annual emissions by 2030 and reach net zero emissions by 2040

Australia is a wealthy nation that can help lead the way to net zero emissions over the next three decades. We want our Government to commit to at least 7.3% annual emissions reductions across Australia’s production of direct emissions and consumption of indirect emissions. This could see us halve Australia’s annual emissions from 2020 levels by 2030, and riding on this success reach net zero emissions by 2040. The Government can facilitate and incentivise these changes in our production and consumption via the below suggestions.

1. Re-focus the economy on improving human and planetary wellbeing rather than GDP growth

GDP is a measure of income and spending. The inadequacies of GDP have been acknowledged since its initial design. GDP counts the bad as good (such as money spent on wars, oil spills and treating illnesses); it ignores many goods (such as parents caring for their own children and growing one’s own food); and assumes that GDP increases are shared by the entire population (while not distinguishing to whom the income and spending is distributed).[[3]](#footnote-3) Economic growth is not intrinsically good. GDP growth is good growth if improves the wellbeing of people and the planet, and it is bad growth if it does not. Following New Zealand and Bhutan’s example, we want our Government to focus on a Happiness Index or Genuine Progress Indicator (GPI) rather than GDP. We want national, state and local policies to be directed at the latter, aiming to maximise wellbeing at minimal economic and environmental costs.

1. Transition to net zero emissions energy sources

One key to a net zero emissions economy is the transition of energy sources from fossil fuels to renewable, net zero emissions energy sources. We want our Government to:

1. transfer fossil fuel subsidies to renewable energy subsidies
2. enable distributed “smart” power grids, such as networks of rooftop solar energy sharing where possible
3. fund publicly-owned solar and wind farms, onshore or offshore, methane digesters, and energy storage
4. cease putting public funding into outdated infrastructures such as building new coal plants
5. fund the re-training of fossil fuel workers to attain jobs in net zero emissions energy and other jobs in the net zero emissions economy
6. leave fossil fuel reserves left in the ground, prohibit the building of new coal mines.

If existing fossil fuel reserves are mined, sold and burned, it will put 2,500 GtCO2e into the atmosphere (Berners-Lee 2011: 175), increasing temperatures to such an extent that it would render all life on earth extinct. Therefore, countries and companies must be content to leave their reserves in the ground. There may be a demand overseas right now and continuing this export market may boost Australian tax income, but this demand is short-lived as renewable energy becomes cheaper than fossil fuels. We must put the long-term health of people and the planet before these short-term profits. Australia is a decade behind other countries yet with our sunshine and our ingenuity we can still be leaders in the new market for solar energy and battery storage.

1. Transition to net zero emissions construction and buildings

We want our Government to encourage the retrofitting of old buildings and to work with construction companies and researchers so that new buildings can be net zero emission both in the way they function and in the materials, technologies and processes used in their construction and maintenance. This includes through insulation, green roofs, smart glass, smart thermostats, alternative cement, recycling, etc.

1. Transition to net zero emissions manufacturing and consumption

While Australia does far less manufacturing than they used to (e.g. of white goods, fashion, cars, toys, etc.), we want our Government to encourage zero emission manufacturing (onshore and offshore) and reductions and changes in consumption, promoting what some call “sustainable materialism.” This means considering the full lifecycle of products, from the raw materials extracted from earth, to the electricity used to manufacture and transport products, to emissions involved in use and the after-life of the product (directing this toward re-use rather than landfill). Possible policies include:

1. outlaw built-in-obsolescence, incentivise the creation of long-lasting products that can be repaired rather than ending up in landfill (which wastes the emissions involved in the whole product lifecycle)
2. fund new jobs and businesses in product parts and repair, and innovations that reuse and repurpose goods
3. encourage thinking about and reporting on the whole product lifecycle from extraction of raw materials through the production process, use and after-life
4. support innovations in recycling of plastic and metals
5. support a shift to ecologically sustainable, long-lasting fashion, outlaw “fast fashion” and fabrics that put microplastic into the ocean when washed
6. provide infrastructure and training comprehensive recycling and composting
7. incentivise massive reductions in food waste at all stages of food production and consumption, including farms, households, restaurants and supermarkets
8. support the cultural shift to plant-rich diets
9. ban air-freighted food imports,[[4]](#footnote-4) encourage locally-grown and self-grown produce
10. work with waste management and landfill companies, as well as building demolition and citizens to educate, fund and incentivise proper handling of refrigerants especially after use, the problems with leakage etc.
11. consider setting up an Ethical Manufacturing Agency of sorts that would fund guidelines, review and reporting of products imported to or made in Australia. This includes ensuring not only that organisations abide by the Modern Slavery Act but also that they meet basic sustainability requirements such as no built-in-obsolescence, design for repair (making parts readily available), and that they are working to align with net-zero emissions targets.
12. Transition to net zero emissions transport

We want our Government to support a transformation of transport such that:

1. encourage the availability of low-cost, net zero emission vehicles, e.g. by reducing import taxes, providing subsidies, etc.
2. build the infrastructure for electric vehicles, with solar- and wind-powered recharge stations
3. facilitate affordable, clean and easily-accessible mass transport, from improving the time and reducing prices of buses and trains to investing in electric high-speed rail (like in the Netherlands)
4. facilitate innovations in net zero emission fuel for airplanes
5. until this is achieved, encourage the reduction of carbon-intensive flights via a large flight tax, using this money to restore forests and fund other climate solutions.
6. Protect, restore and manage of bushlands, forests, wildlife, biodiversity and ecosystems

We want our Government to fund jobs that protect, restore and manage Australia’s bushlands, forests, wildlife, biodiversity and ecosystems. Australia’s Indigenous peoples have managed these lands for millennia, and the Government could seek their advice and employment in land management roles.

1. Transition to sustainable agriculture and farming

We want our Government to collaborate with livestock and agricultural farmers in developing net zero emissions agriculture. This includes:

1. increasing use of trees including encouraging use of silvopastures (forest pastures), growing tropical stables rather than normal staples (for example, more bananas, avocados, breadfruit, and legumes, over wheat, corn, rice and pulses) and tree intercropping
2. moving from extractive agrochemical industrial farming to regenerative agricultural practices, creating robust, complex communities of plants that have a higher carbon intake and healthier soil, reducing the need for pesticides and chemical fertilizers

This involves education, investment, changing business practice and changing cultures and food practices.

1. Family planning programmes, empowerment of women and reduce inequality

Stabilising humanity’s population growth is a pivotal element in reducing annual emissions. We can help by supporting programmes that empower women, educate girls, and alleviate poverty. This includes:

1. community-led family planning programmes
2. community-led education programmes
3. structural changes that enable greater equality within and between countries (e.g. relieve debt burdens, encourage self-sufficiency over cash cropping, etc.)
4. fund businesses working in local contexts with low-income people to improve cookstoves and support women smallholders.
5. Incentivise the market toward zero- emission production and consumption e.g. carbon tax

We want our Government to help mobilise a sustainable economy through market mechanisms such as a carbon tax, anti-trust laws and reducing inequality for a better functioning democracy. A carbon tax of US$70/tCO2 can reduce emissions by 10-40% in different countries (UNEP 2018: xxii). Leading scholars recommend a carbon tax of US$50/tCO2, with a plan to steadily increase it to US$400/tCO2 (Rockström et al. 2017). The business community welcomes the market predictability this would provide. Anti-trust law prevents monopolies, such as those we have allowed in our media. It is the role of Government to prevent monopolies as a basic condition for market economies to function. Inequality feeds a cycle of wealth-power-wealth and erodes democracy. Reducing inequality and seeking “complex equality” is one way to enable your own democratically-led decision-making.

1. Use Government contracts to incentivise shifts by giving preference to businesses committed to net zero emissions targets

We want our Government to use their contracts to shift the focus of businesses to long-term human and nonhuman wellbeing over short-term monetary gains.

1. Education, research and implementation of the above and other climate solutions.

We want our Government to increase funding for research and implementation of climate solutions. This includes:

1. carbon sequestration that works with natural processes (e.g. biochar)
2. careful and holistic approaches to geoengineering
3. education programs for citizen and businesses on high impact avenues for emissions reductions (from LED lighting to water saving, household recycling, buying less, ridesharing, insulating houses, reducing use of heating/cooling, taking less flights, driving less or living car-free, using recycled paper at home and work, investing in rooftop solar, etc.)
4. all other climate solutions.

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1. These estimates, are in the 50-66% probability range, are adjusted for 2018 and 2019, and they include a provision of 100 GtCO2 projected to be released by melting permafrost. [↑](#footnote-ref-1)
2. The total spending involved in implementing the top 80 solutions is estimated at $29,609 billion, while the total savings are $74,362 billion—this is to say, these solutions incur a *net saving* of $44,753 billion over the period 2020-30. Also see Project Drawdown’s website: <https://www.drawdown.org> [↑](#footnote-ref-2)
3. For more on this see Kubiszewski et al. 2013; Raworth 2017. [↑](#footnote-ref-3)
4. Shipping is 100 times more carbon efficient than air-freight, yet locally-grown, seasonal foods are even better (Berners-Lee 2011: 83). [↑](#footnote-ref-4)