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Submissions
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Submission to the Climate Change Authority special review into Australia's climate policy options - Greenpeace Australia Pacific

Greenpeace welcomes the opportunity to make a submission to the CCA special review into Australia's climate policy options.

1. The 2015 Paris Agreement on climate change - implications for Australia

At the UNFCCC Conference of Parties (COP) in Paris in December 2015, 195 countries adopted the world's first universal, binding global agreement to tackle climate change. The agreement included a long term goal of keeping global warming to below 2 degrees above pre-industrial levels, with an aim to expand that goal to 1.5 degrees.[1] The main mechanism for achieving this goal is the Intended Nationally Determined Contributions (INDCs) adopted by the parties to the Agreement.[2] Australia's current INDC requires a 26-28 per cent reduction of greenhouse gas emissions on 2005 levels by 2030.

The Paris Agreement represents an important milestone in global action on climate change. All major emitters are part of the Agreement, and the ability to increase its ambition over time makes it a credible instrument in the fight against dangerous global warming. The near-universal nature of the Agreement also obviates concerns regarding competitive loss to industry as a result of action by any one nation, which have been a significant barrier to action in the past.

However, the total emissions reductions embodied in the INDCs at their current levels do not on their own meet the 2 degree goal, as acknowledged by the COP itself. Assuming that all INDCs are achieved on schedule - itself not guaranteed - the world will warm by around 2.7 degrees: a dangerous and unpredictable level.[3] It is vital that Australia adopt a suite of policies which enable it to significantly increase our emissions reductions targets from the level of its current commitments.

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[1] European Commission (2016) *Paris Agreement,* available from: http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm [18 February 2016].
[2] United Nations Framework Convention on Climate Change (2015) *Intended Nationally Determined Contributions (INDCs*), available from: http://unfccc.int/focus/indc_portal/items/8766.php [18 February 2016].
[3] Climate Action Tracker (2016) *Effect of current pledges and policies on global temperature*, available from: http://climateactiontracker.org/global.html [18 February 2016].

2. Australia's Emissions Reduction Fund

As Greenpeace's earlier submission to the first round of the CCA special review - prior to the adoption of Australia's 2030 INDC - noted, a fair and credible approach would see Australia aim for targets of:

- 40-60 per cent reduction by 2025 from 2000 levels
- 60-80 percent reduction by 2030 from 2000 levels
- Zero net emissions by 2040

Australia's current INDC is one of the lowest in the developed world. However, it is clear Australia's current policy settings cannot deliver even the emissions reductions required under our 2030 target.

The main element of Australia's strategy to meet its INDC is the federal Emissions Reduction Fund (ERF), described by the Department of Environment as the 'centrepiece' of Australia's action on climate change. The ERF's current budget to 2030 is $4.95 billion. Based on the abatement price of $13.95 per tonne achieved at the first ERF auction, this budget would be sufficient to meet only 14 per cent of Australia's modest INDC.[4]

Moreover, it is clear on the basis of the Paris Agreement that all countries, including Australia, will need to exceed current targets as INDCs are ratcheted up during the 5 year review periods designed to increase the ambition of the Agreement and divert the world from the current 2.7 degree pathway.

It may technically be possible to meet Australia's increasing obligations through the ERF. However, due to the structure of the Fund this would require a massive increase in the ERF's budget: the Australian Industry Fund estimates that cost to be $100-250 billion, without the use of international credits.[5] This would be both inefficient and prohibitively expensive for the Australian taxpayer.

Even if those funds were made available, it remains unlikely that the ERF would reduce Australia's emissions sufficiently due to the ineffectiveness of its 'Safeguard Mechanism'. That mechanism is designed to avoid increases 'above business as usual' from parts of the economy not covered by the ERF by setting emissions baselines for around 140 of Australia's highest emitting organisations, responsible for around 50 per cent of all emissions. The limited coverage of the mechanism aside, those baselines in fact allow emissions to rise because they most commonly relate to the highest emissions achieved

[4] The Climate Institute (2015) *Policy brief: how much can the Emissions Reduction Fund really achieve?*, available from: http://www.climateinstitute.org.au/verve/_resources/ERF-PolicyBrief-WEB.pdf [18 February 2016].
[5] Reed, T. (2015) 'How does the new emissions reduction target impact manufacturers?', *Ai Group Blog*, available from: http://blog.aigroup.com.au/how-does-the-new-emissions-reduction-target-impact-manufacturers/ [18 February 2016].

by the entities in question over the past 5 years, without considering any reductions in the intervening period, as well as including provisions for the baselines to be revised upwards in certain circumstances.[6]

The inadequacy of the ERF demands that alternative mechanisms for meeting Australia's fair obligations to reduce its emissions need to be adopted as a matter of urgency.

3. Carbon pricing mechanisms

While Greenpeace believes that pricing carbon is one key component to effective action on climate change, we do not take a position on which specific carbon pricing mechanisms, such as a carbon tax or emissions trading scheme, should be adopted by Australia. A suite of tools remains the best approach, as long as key criteria are met. The overall effect of any policy must:

- Meet our fair obligations to reduce emissions so that a global goal of 1.5 degrees of warming is achieved, including an ambitious legislated cap on emissions
- Have emissions reductions which are legally enforceable, not voluntary
- Ensure that any impact affects all sections of the Australian population equitably
- Cover all carbon emitting industries and activities
- Avoid offset provisions which are open to manipulation and double counting

There are examples of effective carbon pricing mechanisms around the world which may prove instructive in determining Australia's future policies.

British Columbia's popular direct carbon tax, launched in 2008, has led to a significant drop in emissions and a drop of 16 per cent in fuel use (compared to a 3 per cent increase across the rest of Canada). The scheme is revenue neutral, returning its revenue in the form of personal and corporate tax cuts, such that British Columbia is now Canada's lowest taxing state, while maintaining an economic growth rate above the Canadian average.[7]

California's cap and trade programme, launched in 2013, has reduced emissions during a period of economic growth, and has been characterised by a stable carbon market, high levels of company compliance, and ongoing political support. Revenue from the programme - a total of USD $902 million through to mid-2015 - is directed into a

[6] The Climate Institute (2015) *Policy brief: how much can the Emissions Reduction Fund really achieve?*, available from: http://www.climateinstitute.org.au/verve/_resources/ERF-PolicyBrief-WEB.pdf [18 February 2016].

[7] Beatty, R, Lipsey, R and Elgie, S. (July 9 2014) 'The shocking truth about BC's carbon tax: it works', *Globe and Mail*, available from: http://www.theglobeandmail.com/opinion/the-insidious-truth-about-bcs-carbon-tax-it-works/article19512237/ [18 February 2016].

Greenhouse Gas Reduction Fund which invests in projects that will help to reduce the state's emissions further.[8]

4. Renewable energy

Australia is one of the sunniest and windiest countries in the world. Annual solar radiation falling on Australia is approximately 58 million petajoules (PJ) or around 10,000 times Australia's annual energy consumption. When limited to areas within 25km of existing transmission lines, the figure is still nearly 500 times annual energy consumption.[9] This provides an excellent opportunity for Australia to be a world leader in the uptake of large scale and household renewable energy. Direct policies which drive investment in renewables are an integral part of any comprehensive strategy to reduce greenhouse gas emissions and tackle climate change. It is disappointing, therefore, that the current federal government has sought, and continues to seek, the dismantling of successful schemes designed to increase the proportion of Australia's electricity generated from renewable sources.

4.1 The Renewable Energy Target

The Renewable Energy Target, which has seen Australia's share of renewable energy go from near zero since its establishment by the Howard government in 2001 to 13.5 per cent, was cut in 2015 from 41,000 GWh to 33,000 GWh by 2020.[10] Greenpeace recommends that the RET be restored to its previous level and extended beyond 2020 to meet a target of 50 per cent of electricity from renewables by 2030.

4.2 The Clean Energy Finance Corporation and the Australian Renewable Energy Agency

At the time of submission it remains the Turnbull government's policy to abolish the Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA), despite their proven record of success in driving investment and innovation in renewable energy. The CEFC has made a profit of $73 million for the taxpayer since its inception and has driven $2 billion of private investment in renewable energy projects,

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[8] Environmental Defense Fund (2015) *Carbon Market California: A comprehensive analysis of the golden state's cap and trade program*, available from: http://www.edf.org/sites/default/files/content/carbon_market_california_year_two_executive_summary.pdf [18 February 2016].

[9] Geoscience Australia and ABARE (2010), *Australian Energy Resource Assessment*, 261. On wind resources, see *Ibid*. 246-8.

[10] Clean Energy Council (2015) *Clean Energy Australia Report 2014*, available from: https://www.cleanenergycouncil.org.au/policy-advocacy/reports/clean-energy-australia-report.html [18 February 2016].

according to CEFC CEO Michael Slezak.[11] ARENA has completed 53 renewable energy projects around Australia, and is currently managing over 200.[12]

Greenpeace recommends that the government reverse its policy of abolishing ARENA and the CEFC, significantly expand the funding available to both organisations, and provide long term certainty regarding their continued work in contributing to Australia's emissions reduction obligations.

5. Vehicle emissions

Currently no vehicle emissions standards for CO_2 exist in Australia.[13] While Australia has standards for air pollutants (hydrocarbons, carbon monoxide, nitrogen oxide, particulate numbers and particulate matter) these only meet the obsolete 'Euro 4' standard.[14] With transport accounting for 17 per cent of Australia's greenhouse gas emissions, introducing strict vehicle emissions standards for CO_2 and non-carbon air pollutants would make a substantial contribution to meeting Australia's emissions reduction targets as well as lead to measurable improvements in public health.[15]

Robust vehicle emissions standards are already in place around the world. The United States Environmental Protection Authority (EPA) currently regulates many mobile sources of emissions including aircraft, heavy-duty vehicles, light-duty vehicles, locomotives, motorcycles, marine engines, a variety of non-road engines and equipment and recreational engines and vehicles.[16] The 2020 target for new passenger vehicles in the United States is 121 grams of CO_2 per kilometre (CO_2/km) and for 2025 is 93g CO_2/km.[17] This equates to 5.2 litres fuel per 100km (l/100km) for 2020 and 4.1 l/100km for 2025.[18] The EPA and US National Highway and Traffic Safety Administration (NHTSA) in June 2015 proposed further improvements for heavy-duty vehicles with the aim to cut 1 billion

[11] Commonwealth of Australia (2016) *Senate: Environment and Communications Legislation Committee, Monday 8th February 2016: official Hansard*, 80.
[12] Australian Renewable Energy Agency (2016) *Projects*, available from: http://arena.gov.au/projects/ [18 February 2016].
[13] Australian Government, Department of Infrastructure and Regional Development (2015) *Vehicle Emissions Standards*, available from: https://infrastructure.gov.au/roads/environment/emission/index.aspx [18 February 2016].
[14] *Ibid*.
[15] Australian Government (2016) *Vehicle Emissions Discussion Paper*, 4, available from: https://infrastructure.gov.au/roads/environment/forum/files/Vehicle_Emissions_Discussion_Paper.pdf [18 February 2016].; European Environment Agency (2014) *Air Quality in Europe – 2014 Report*, 2014, 29-56, available from: file:///Users/vol1/Downloads/Air%20quality%20in%20Europe%202014.pdf [18 February 2016].
[16] United States Environmental Protection Agency (2012) *Emissions Standard Reference Guide*, available from: http://www3.epa.gov/otaq/standards/basicinfo.htm [18 February 2016].
[17] Australian Government, Climate Change Authority (2012) *International implementation of vehicle emissions standards*, available from: http://www.climatechangeauthority.gov.au/reviews/light-vehicle-emissions-standards-australia/international-implementation-vehicle-emissions [18 February 2016].
[18] *Ibid*.

metric tons of carbon pollution.[19] Additionally California has set standards to regulate motor vehicle emissions within the state from 2009 onwards.[20] The benefits from these standards include reduced greenhouse gases, reduced costs for drivers and increased fuel security.[21]

The most recent Europe-wide standard, 'Euro Standard 6', sets a 2015 target for new passenger vehicles of 130g CO_2/km or 5.6 l/100km petrol or 4.9 l/100 km diesel.[22] The target for 2021 is 95g CO_2/km, or 4.1 litres of petrol/100km or 3.61 litres of diesel/100km.[23] Proposals for more stringent standards in the European Union of 68-78 g CO_2/km have been suggested but not yet agreed upon.[24] The EU in 2014 started discussing reducing emissions from heavy-duty vehicles but is yet to implement an emissions standard.[25] The International Civil Aviation Organisation has recently also proposed a performance standard for aircraft fuel efficiency and reductions in CO_2.[26]

Greenpeace recommends that Australia adopt a standard of 95g CO_2/km by 2020 and 78g CO_2/km by 2025 for new passenger vehicles, together with the immediate adoption of non-carbon air pollutant restrictions equivalent to the Euro 6 standard. Commensurate standards for other types of vehicles, including heavy-duty vehicles, should also be adopted for coherence. The compliance monitoring system must be robust and fully resourced to avoid the risk of being evaded or gamed by manufacturers, as in the recent Volkswagen case.[27]

6. Land use, land use change and forestry (LULUCF)

The Land Use, Land Use Change and Forestry ('LULUCF') sector should be a critical part of Australia's emissions reduction strategy. As the CCA discussion paper rightly points out, '(w)hile the land use, land use change and forestry sector only accounted for 3 per cent of emissions, it could be of greater significance to Australia's emissions

[19] National Highway Traffic Safety Administration, *CAFE – Fuel Economy*, available from: http://www.nhtsa.gov/fuel-economy [18 February 2016].
[20] United States Environmental Protection Agency (2015) *Regulations & Standards*, available from: http://www3.epa.gov/otaq/climate/regulations.htm [18 February 2016].
[21] Center for Climate and Energy Solutions, *Federal Vehicle Standards*, available from: http://www.c2es.org/federal/executive/vehicle-standards [18 February 2016].
[22] European Commission (2016) *Reducing CO2 emissions from passengers cars*, available from: http://ec.europa.eu/clima/policies/transport/vehicles/cars/index_en.htm [18 February 2016].
[23] *Ibid*.
[24] Australian Government, Climate Change Authority (2012) *International implementation of vehicle emissions standards*, available from: http://www.climatechangeauthority.gov.au/reviews/light-vehicle-emissions-standards-australia/international-implementation-vehicle-emissions [18 February 2016].
[25] European Commission (2015) *Reducing CO2 emissions from Heavy-Duty Vehicles*, available from: http://ec.europa.eu/clima/policies/transport/vehicles/heavy/index_en.htm [18 February 2016].
[26] International Council on Clean Transportation (2016) *International Civil Aviation Organisation CO2 standard for new aircraft*, available from: http://www.theicct.org/icao-proposed-co2-standard-update-201602 [18 February 2016].
[27] Hotten, R. (2015), 'Volkswagen: the scandal explained', *BBC News*, available at: http://www.bbc.com/news/business-34324772 [19 February 2016].

reduction efforts than this figure suggests. This sector is both a source of emissions (from the clearing and harvesting of vegetation) and also stores carbon in forests and other vegetation, sometimes known as a carbon sink.'

6.1 Australia's LULUCF policies should maximise carbon drawdown, not embed offsetting

The LULUCF sector provides Australia with significant opportunities for mitigating climate change and for carbon drawdown. As noted above, LULUCF can be both a net source of emissions or a carbon sink, and informed policy will result in this sector drawing down carbon emissions rather than creating them. However, forest protection and restoration as well as other land-use management must not be used to offset continued fossil fuel emissions through carbon trading, as the highest possible mitigation ambition is needed in both sectors. While in the past, successive Australian governments have used LULUCF accounting to avoid making concrete reductions in Australia's fossil fuel emissions, it is critical that Australia must not lock in further offsetting and accounting rules that let it avoid cutting fossil fuel emissions.[28]

6.2 Australia should adopt a gross-gross accounting approach to the way in which emissions are calculated

Under a net-net accounting approach as adopted in Australia's INDC, LULUCF can mask an increase in emissions from other areas of the economy - net emissions being the sum of emissions and removals from the relevant accounting period. Conversely, a gross-gross approach only includes emissions and not drawdowns, so long as targets are set from base year emissions excluding LULUCF and only cover emissions in the target year. [29] A gross-gross approach is needed to effectively create separate emissions reduction and drawdown targets.

6.3 The Australian Government's commitment to strong forest protection

The Australian Government has made a number of strong statements and commitments on the importance of protecting forests and sustainable land use in pursuit of the globally agreed goal of constraining climate change to within two degrees of warming. Australia signed the Paris Agreement committing parties to 'take action to conserve and enhance sinks and reservoirs of greenhouse gases, […] including forests.[30]

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[28] The most well-known use of such accounting was the inclusion of deforestation emissions in Australia' base 1990 emissions level, despite that year marking a high point for these types of emissions. See Climate Action Tracker (2015) *Australia set to overshoot its 2030 target by large margin*, 8, available at: http://climateactiontracker.org/assets/publications/briefing_papers/082015_Australia.pdf [18 February 2016].

[29] *Ibid*. 7.

[30] *Paris Agreement* (December 2015), Article 5.

The Sustainable Development Goals (September 2015) encourage the implementation of sustainable management of forests and to 'halt deforestation, restore degraded forests and substantially increase afforestation and reforestation'.[31] Prime Minister Turnbull has stated that 'it makes economic, social and environmental sense to protect and restore forests'.[32] These welcome statements and commitments should be reflected in the substance of Australia's climate policy.

6.4 The potential for LULUCF to help Australia reduce emissions and store carbon

LULUCF has enormous potential as an additional, rather than exchangeable, source of emissions reductions. Australia's climate policy should recognise the role of forests as carbon sinks and the need to increase their capacity to store carbon. It is currently estimated that the carbon content of 14.5 million hectares of forest in south-east Australia, for example, is 40 per cent below its carbon-carrying capacity, a significant loss of potential carbon sequestration.[33] Proper forest protection and afforestation/reforestation policies could increase the carbon sequestration capacity of these and other native forests. Additionally, there is exciting potential for soil-carbon initiatives in Australia to regenerate degraded soil whist increasing carbon sequestration.

Land clearing and forest degradation and destruction must be halted in order to preserve our carbon sinks. The Commonwealth Government should use its environmental jurisdiction and work with state governments to implement a nationally consistent approach to land clearing and ending deforestation of native forests. Extensive land clearing, primarily in Queensland,[34] has led to LULUCF becoming a net source of emissions, rather than a sink.[35] Native forest logging continues in most states of Australia and this state-based activity is inconsistent with our international agreements to protect forests and counter-productive to reducing emissions. There is huge potential for federal-state inter-governmental agreements to reduce emissions from land-use and forestry sectors.

It is important that Australia's forestry policy is firmly integrated into its climate change strategy to ensure consistency across policy areas. The Government should take advantage of the expiry of Regional Forestry Agreements (RFAs) in the period 2017 –

[31] *Sustainable Development Goals* (September 2015), Article 15.2.

[32] Leaders' Statement on Forests and Climate Change, *UNFCCC Paris Conference* (30 November 2015), available at: http://newsroom.unfccc.int/nature-s-role/forests-as-key-climate-solution/ [18 February 2016].

[33] Zero Carbon Australia (2014) *Land Use: Agriculture and Forestry Discussion Paper*, 93, available at: http://media.bze.org.au/lur/BZE%20Zero%20Carbon%20Australia%20Land%20Use%20report.pdf [18 February 2016].

[34] Department of Natural Resources and Mines (2015) *Vegetation clearing rates in Queensland: Supplementary report to the Statewide Landcover and Trees Study Report 2012-14*, 3, available at: https://publications.qld.gov.au/dataset/9a49e739-ac5d-40f3-9dcb-241bf3cc5032/resource/7aa336f9-c9c8-486c-81a3-8bab2a52b350/download/slatssupplementaryreport201214.pdf [18 February 2016].

[35] Department of the Environment (2015) *Quarterly Update of the National Greenhouse Inventory*, available at: https://www.environment.gov.au/system/files/resources/cb14abbb-3a4b-406f-a22d-86f565674c3e/files/nggi-quarterly-update-jun-2015.pdf [18 February 2016].

2020 to ensure that climate change and the use of forests as carbon sinks is properly recognised by protecting native forests.[36] This is particularly important given recent scientific reports finding that the carbon stock of logged forests is 55 per cent less than the stock of old growth forests[37] and Australia houses some of the highest known total biomass carbon density forests globally.[38]

Consistent with public statements by the Prime Minister and Environment Minister, Australia should support international efforts to end deforestation and support restoration/afforestation. Australia should re-commit to supporting initiatives like REDD+ which support tropical forest countries to avoid deforestation. REDD+ initiatives can have wide-ranging economic, social and environmental benefits[39] and can positively impact on carbon sequestration, biodiversity conservation and rural livelihoods when properly managed.[40] Australia's involvement in these initiatives should be consolidated and financial surety provided to ensure their continued, sustainable development. However, these initiatives should be financed through non-carbon payments rather than through an international offset system.

7. Carbon Offsets

Greenpeace Australia Pacific does not support the use of international offsets as part of efforts to move towards a net-zero emissions world.

7.1 The risk of carbon offsets

The collapse of carbon markets in other jurisdictions should serve as a warning to Australia that offsets run the risk of delaying the urgent action required to decarbonise the global economy. It is commonly assumed that offsets are a mechanism whereby a company that is proposing to increase its greenhouse emissions pays another company to reduce its greenhouse emissions at a lower cost. In fact, offsets generally fund technologies to reduce greenhouse emissions in new projects.

While Australia is planning to reduce emissions from a 2005 baseline, offsets reduce emissions from a business-as-usual baseline, which means that the future emissions from the project are lower than what would otherwise have been the case. Calculating

[36] Lindenmayer, D., Blair, D. et al. (2015) 'The need for a comprehensive reassessment of the Regional Forest Agreements in Australia', *Pacific Conservation Biology* 21 (4), 266.
[37] Keith, H., Lindenmayer, D. et al. (2014) 'Managing temperate forests for carbon storage: impacts of logging versus forest protection on carbon stocks', 5 *Ecosphere* 6, 1-34.
[38] Keith, H., Mackey, B. and Lindenmayer, D. (2008) 'Re-evaluation of forest biomass carbon stocks and lessons from the world's most carbon-dense forests', *PNAS* 106.28, available at: http://www.pnas.org/content/106/28/11635.long [18 February 2016].
[39] Leaders' Statement on Forests and Climate Change, UNFCCC Paris Conference (30 November 2015), available at: http://newsroom.unfccc.int/nature-s-role/forests-as-key-climate-solution/ [18 February 2016].
[40] Agrawal, A., Nepstad, D. and Chhatre, A. (2011) 'Reducing Emissions from Deforestation and Forest Degradation', *Annual Review of Environment and Resources* 36: 373-396.

business-as-usual baselines is fraught with danger, since it is impossible to know what policy settings countries will adopt in the absence of finance for carbon reductions. A recent example of this is the Indonesian government's prohibition of peatland clearance in November 2015 in response to forest fires.[41] Companies that purchased avoided deforestation offsets on Indonesian peatland can claim emissions reductions that would have happened anyway due to the ban.

7.2 Australia should not use international offsets to meets its carbon emission reductions targets

The use of land-based carbon credits to offset emissions from burning fossil fuels is particularly problematic.[42] The major cause of anthropogenic climate change is the transfer of carbon from the lithosphere, in the form of fossil fuels, into the biosphere. Forests act as critical carbon sinks that drawn down atmospheric carbon in order to reduce atmospheric greenhouse gas concentrations, but due to their much shorter lifespan they cannot act as offsets for burning fossil fuels. Forest fires are also likely to increase in frequency and severity as a result of climate change that has already been locked in, resulting in a release of large amounts of carbon dioxide back into the upper stratosphere.[43]

Allowing forests to be used as offsets would set us on a trajectory of burning more of the fossil fuels that we need to leave in the ground in order to avoid catastrophic climate change. Our only chance to stop climate change is to avoid carbon emissions from all sources, meaning that we need to ultimately end burning fossil fuels while at the same time protecting forests.

8. Fossil fuel extraction

Ambitious action to reduce Australia's own greenhouse gas emissions is indispensable to an effective strategy to curb climate change and ensure a liveable world. However, any credible global approach to the challenge of climate change must focus on the whole supply chain, targeting not only users of fossil fuels but also the countries responsible for their extraction and export.

Coal is the most emissions intensive fossil fuel. Australia is the world's second largest exporter of thermal coal and the largest exporter of metallurgical coal. Keeping global warming to below 2 degrees is incompatible with a substantial Australian thermal coal

[41] Butler, R. (November 10 2015) "Indonesia bans peatlands destruction", *Mongabay*, available at: http://news.mongabay.com/2015/11/indonesia-bans-peatlands-destruction [18 February 2016].
[42] Bock, S. (2013) 'Flawed Logic: Why forests cannot offset fossil fuel emissions', *Greenpeace International*, available at: http://www.greenpeace.org/international/Global/international/briefings/forests/2013/Offsets-briefing-Flawed-Logic.pdf [18 February 2016].
[43] Turetsky et al. (2015) 'Global vulnerability of peatlands to fire and carbon loss', *Nature Geoscience* 9, 11-14.

mining industry. 90 per cent of known Australian coal reserves must remain in the ground if the world is to have an even chance of meeting a 2 degree goal.[44]

Greenpeace recommends that the federal government complement its emissions reduction efforts with a robust resources policy that acknowledges the impact of those efforts in driving the decline of thermal coal; sets in place policy measures which accelerate the wind down of the Australian thermal coal mining industry; and provides for a planned, just transition for coal mine workers impacted by a shift to a carbon neutral world.

Yours Sincerely,

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[44] Climate Council (2015), *Unburnable carbon: why we need to keep fossil fuels in the ground*, available from: http://www.climatecouncil.org.au/unburnable-carbon-why-we-need-to-leave-fossil-fuels-in-the-ground [18 February 2016].