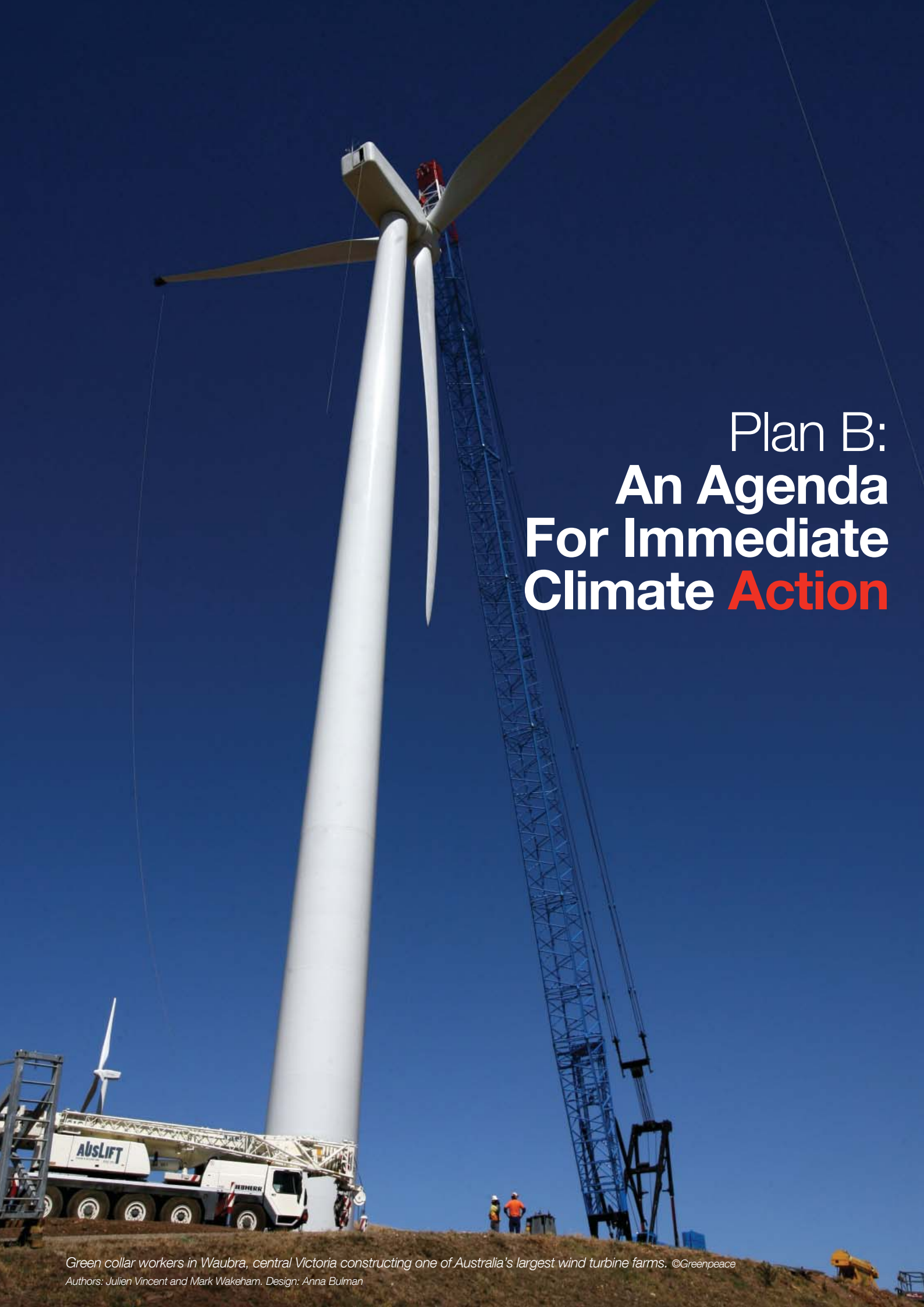

Plan B: An Agenda For Immediate Climate Action

Green collar workers in Waubra, central Victoria constructing one of Australia's largest wind turbine farms. ©Greenpeace

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PLAN B:
Joint Statement

Amid increasingly dire scientific predictions, it is easy to feel disillusioned by Australia's response to the climate crisis. This is even more the case, as the fundamentally flawed Carbon Pollution Reduction Scheme (CPRS) has become the dominant focus for policy-makers and political debate alike.

The CPRS, as the Federal Government's main policy response to climate change, ignores the science, perversely rewards big polluters and will result in Australia's greenhouse gas emissions continuing to rise. Given the stark evidence from around the globe of a rapidly warming climate, this is unacceptable.

An effective mechanism for pricing greenhouse pollution is important. However, The CPRS would lock in bad policy and if it were to be passed in its present form would constitute a failure of political leadership and a failure of our Government to act in Australia's national interest.

We, the undersigned organisations, representing a combined membership of over 400,000 Australians, call on the government to send the CPRS back to the drawing board, replacing it with an effective policy for pricing greenhouse pollution that will genuinely drive down Australia's greenhouse gas emissions.

In the meantime, the Government must immediately begin work on a 'Plan B', delivering policies and actions that have an immediate impact to reduce greenhouse pollution, build Australia's capacity for halving our emissions over the next decade and increase Australia's resilience to the increasingly harsh impacts of climate change.

An urgent alternative plan of action would always have been required, regardless of whether or not the CPRS is passed, given its inadequacies. Fortunately, there are many positive, job-creating, emissions-reducing solutions that Australian governments can implement right now. Action across the following five areas could achieve significant pollution reduction in the next few years, and allow Australia to make deep cuts in emissions over the next decade.

1. Prioritise saving energy.

Saving energy is one of the simplest, fastest and cheapest ways to reduce our greenhouse pollution. By using less energy where we don't need it, we could reduce our energy use in the manufacturing, commercial and residential sectors by 30% with technologies available today and an average payback of four years. And we can do it with the same level of comfort, service and productivity.

Greening our homes and workplaces is a smart measure in the face of rising electricity bills and hotter, drier climates. We save money on our electricity bills, which can then be used to buy cleaner, greener energy. That's a win-win solution.

2. Fast-track the switch to a renewable-energy economy

Australia has an abundance of renewable energy resources. By right, we should be leading the world in developing new renewable energy industries. Unfortunately, until now, our governments have protected old polluting industries and stifled the growth of the new renewable energy economy. We must transition Australia away from coal-fired power with the next decade. Using the right policy levers, we can quickly ramp up our renewable energy production and put Australia on the fast-track to zero emissions power stations, creating tens of thousands of jobs in the process.

Green collar worker Peter Sewell at the biggest operating solar thermal plant in Australia. ©Greenpeace

Environment Victoria | Queensland Conservation | Nature Conservation Council of NSW | Environment Centre NT | Environment Tasmania Inc | Conservation Council of South Australia Inc

Green collar worker at Keppel Prince - an Australian company based in Portland that manufactures and installs wind turbines in Australia. ©Greenpeace

3. Drive the shift to low emissions vehicles and sustainable cities

Following the recent lead of Barack Obama and the United States, Australia should introduce mandatory efficiency standards for all new cars we manufacture. This would not only save money at the petrol station but also reduce our oil imports and help us slash our greenhouse emissions.

A new electric vehicle market beckons for whichever countries seize the opportunity. Strong investment in our public transport will create jobs and make leaving the car at home a viable choice for all. We can design our cities for ease of travel and local living, taking the stress out of the daily commute and lessening our impact on the environment.

4. Protect our forests and woodlands as a carbon store and make agriculture a part of the solution

Australia's forests, woodlands, wetlands and mangroves are established habitats for native species, precious natural heritage and a massive store of carbon. Protecting nature is a smart climate change solution – reducing emissions and building natures' resilience against climate change. New economic opportunities for rural and remote Australia can be through improved climate friendly farming practices, sequestration benefits provided by protecting, rather than logging and clearing forests and woodlands and through benefits to indigenous and non indigenous communities through reduced burning practices in the northern savannahs.

Our farmers need support to become a part of the solution as they grapple with climate impacts such as drought. Helping them to adopt more sustainable farming practices will not only reduce emissions, but also increase our productivity and the resilience of the Australian agricultural industry to climate impacts such as drought.

5. Grow the green job economy

Globally the economic powerhouses of the 21st century will be those countries that have seen the writing on the wall and have made the early transition to green jobs and low-emissions industries. Australia could be one of the early movers and reap the fruitful rewards. However, these jobs and industries won't emerge fast enough on their own. We need to identify and support them through deliberate policy measures and industry development packages.

We can implement a plan to create new jobs and industries, make existing jobs greener and develop the workforce training and skills these industries will need. Governments must also look after communities adversely affected by the transition away from emissions-intensive activities, making them as much a part of a prosperous, low-emission economy as possible.

These are just some of the actions our governments can take right now to cut greenhouse pollution. We strongly urge Australian governments to enact these measures to deliver real emission reductions immediately, and prepare Australia for making deep cuts in greenhouse gas emissions over the coming decade.

With or without a CPRS, state and federal governments can achieve real win-win solutions. We can create green jobs in clean industries, revitalise Australia's economic landscape, increase our resilience to climate change impacts, save the community money on energy and fuel costs and dramatically reduce our greenhouse gas emissions.

It's time to stop listening to the harbingers of economic doom and gloom, who threaten economic disaster at the suggestion of any emissions reductions measure. It's time to dismiss these claims for what they are – the last gasps of the big polluters.

It's time to get on with the job of creating new green jobs and industries, ensuring that our generation and those that follow have the opportunity to lead clean, prosperous and peaceful lives.

It's time for Plan B.

CONSERVATION COUNCIL OF WESTERN AUSTRALIA INC. | CONSERVATION COUNCIL ACT REGION | cfhec | THE WILDERNESS SOCIETY | Friends of the Earth | GREENPEACE

Plan B: **an agenda for immediate action on climate change**

Plan B: **the rationale**

Global warming is accelerating at a terrifying rate, beyond even the worst case scenarios projected by the IPCC. Climate change impacts are also taking place much faster than previously predicted. The Arctic summer ice is now expected to melt entirely in the next five years – 80 years earlier than previously thought[1]. Scientists are increasingly of the view that we already have too much greenhouse pollution in the atmosphere[2], and a safe climate response demands that we reduce emissions as fast as humanly possible.

Australia is experiencing climate impacts now. Exacerbated droughts, bushfires, floods, loss of agricultural productivity, loss of native species and threatened natural icons such as the Great Barrier Reef and Kakadu are the reality of climate change in Australia today. However, this is only the beginning. If greenhouse pollution is not urgently curtailed we will soon trigger feedback loops leading to "runaway" climate change[3], rendering us incapable of keeping temperature rise under control and avoiding catastrophic impacts.

Runaway climate change will only be avoided with a strong international deal. However, failing to offer our own plan of action commensurate with the threat is reckless and irresponsible. Despite the promises ahead of the 2007 Federal election, Australian climate policy has stalled. The Carbon Pollution Reduction Scheme (CPRS), in its current form, would prevent Australia from making the required contribution to global emission reductions in order to prevent runaway climate change.

The CPRS would lock Australia into a high-emissions pathway for decades to come[4], due to weak greenhouse pollution reduction targets, combined with numerous design flaws, including excessive handouts to major polluters, the issuing of pollution permits as property rights and unlimited international offsetting instead of real pollution reductions in Australia. Given also that the CPRS makes it extremely difficult for any Australian individual, business or government to alter Australia's emissions profile, it is an unacceptable policy response.

The CPRS must be taken back to the drawing board and while an effective economy-wide approach to reducing greenhouse emissions is developed, Australia should begin the process of making deep cuts in emissions over the next decade.

Plan B: **the action plan**

This document presents a 'Plan B'; an alternative to the CPRS, outlining measures that could be enacted in the next two years and would set Australia up to meet the vital target of halving our greenhouse pollution over the coming decade. The environment groups behind Plan B are concerned that action to reduce greenhouse gas emissions has been hamstrung by the political debate around the CPRS at the expense of simpler and effective measures that should be enacted as soon as possible.

Each and every one of the measures outlined in Plan B will either deliver immediate reductions in greenhouse gas emissions, enable Australia to make deep cuts in emissions over the next decade, or both. The overall package of Plan B is jobs-positive, creating tens of thousands of green jobs and stimulating clean industry development. Many of these measures will also protect Australians on the front line of climate change, strengthening their resilience to climate impacts.

Australia's governments should urgently enact the measures outlined in Plan B, regardless of the future that awaits the CPRS. There is no time to wait for an effective policy for pricing greenhouse pollution and genuinely cutting emissions. If that policy arrives it will be welcome, as it would be one of the ways a transition to a low-carbon future would be funded. However we must act now, act together and act whole-heartedly to prepare Australia for rapid reductions in greenhouse gas emissions.

It's time for 'Plan B'.

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[1] Final Warning, Greenpeace Australia Pacific, March 2009. http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/finalwarning240309.pdf

[2] See, for example, NASA Goddard Institute Chief Climate Scientists Dr. James Hansen's comments http://www.cejournal.net/?p=1590

[3] The Intergovernmental Panel on Climate Change, Fourth Assessment Report, Working Group 2, Chapter 19 outlines several of the key processes that would act as "positive feedback" processes, amplifying the effects of global warming, either through accelerated warming or additional greenhouse gas emissions. http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter19.pdf

[4] The Treasury Modelling (http://www.treasury.gov.au/lowpollutionfuture/report/downloads/06_Chapter6.pdf, p155, Chart 6.14) shoes that there are no significant reductions in Australia's actual emissions under a CPRS –5 scenario until 2035.

Prioritise saving energy

Saving energy is one of the simplest, fastest and cheapest ways to reduce our greenhouse pollution. By using less energy where we don't need it, we could reduce our energy use in the manufacturing, commercial and residential sectors by 30% with technologies available today and an average payback of four years[5]. And we can do it with the same level of comfort, service and productivity.

Greening our homes and workplaces is a smart measure in the face of rising electricity bills and hotter, drier climates. We save money on our electricity bills, which can then be used to buy cleaner, greener energy. That's a win-win solution. State and federal governments should immediately develop a National Energy Savings Program that ensures basic energy efficiency measures and technologies are applied across every Australian building and industry by 2020

A green overhaul of Australia's buildings over the next decade.	Currently, buildings account for nearly 30 per cent of total carbon emissions worldwide. A recent study has shown that employing cost-effective measures could help reduce these emissions by at least a third[6] and create jobs[7]. Energy efficiency remains not only the cheapest way to reduce greenhouse gas emissions[8], but is also a premium area for employment growth. <u>Residential buildings</u> The Federal Government should work with the states to provide a green makeover for 5 million houses nationally in the next five years (roughly half of the housing stock). This program would combine and coordinate existing efficiency programs and require some new funding, though substantial funding is already committed, making this measure easier to enact. Measures would include household audits, upgrading households with compact fluorescent lamps, weather sealing retrofits, ceiling insulation, installation of solar hot water systems or heat pump systems, installation of high efficiency showerheads, dual flush toilet systems, tap flow controllers and fridge upgrades. 1) **Fully financed retrofits for low-income households** Funded by packaging together existing state and federal programs and providing additional state allocation for coordination and a 'one-stop-shop' approach to the program. Streamlining programs into one delivery mechanism would avoid a piecemeal approach where, for example, light-globes are changed under one program and showerheads under another. A broad definition of low-income households should be used in line with the model proposed by the Brotherhood of St Laurence[9] to deliver economies of scale and significant water and energy savings. 2) **Bundling together incentives programs for higher income households** For higher income households there is also a need for greater coordination of programs. The Green Loan fund scheme starting in July 2009 is well placed to provide significant support for a retrofit program, however incorporating incentives under VEET and other programs and providing streamlined delivery mechanisms (e.g. street-by-street retrofit programs) would maximise the benefit from existing programs and deliver economies of scale. 3) **Regulatory standards** The simplest way to deliver a renovation rescue package would be to require all homes to meet acceptable environmental performance standards at the time of sale or lease. These standards could be introduced over the next 12 months and then progressively tightened over the next five years, as we build the workforce and skills necessary to retrofit our entire building stock.

[5] NFEE, Towards a National Framework for Energy Efficiency – Issues and challenges discussion paper. http://www.ret.gov.au/Documents/mce/energy-eff/nfee/_documents/nfee_discussio.pdf

[6] Diana Ürge-Vorsatz and Aleksandra Novikova. 2008. Potentials and Costs of Carbon Dioxide Mitigation in the World's Buildings. Energy Policy, Vol. 36 (2008), pp. 642–61

[7] Intergovernmental Panel on Climate Change (IPCC), Climate Change 2007: Mitigation of Climate Change 2007, Contribution of Working Group III to the Fourth Assessment Report of the IPCC (Cambridge, UK and New York: Cambridge University Press, 2007), p. 389.

[8] For example, McKinsey & Company 2008, An Australian cost curve for greenhouse gas reduction, www.mckinsey.com/mgi

[9] See, for example the work of the Brotherhood of St Lawrence on climate change research and low-income households. http://www.bsl.org.au/pdfs/commentapr09.pdf

	Regulatory standards at point of sale or lease spreads the responsibility for improving our building stock across the whole community. It removes the split incentive that sees many renters living in homes with poor energy and water efficiency while having minimal ability to invest in environmental measures. It would also reach high income, high consumption households that may not access voluntary rebate programs. <u>Commercial buildings</u> An overhaul of Australia's commercial building stock will require the implementation of similar measures as the residential building sector, such as regulatory standards for commercial buildings at the time of sale or lease. However, several business incentives will be critical to realising energy savings in commercial buildings: **1. Green depreciation** By making energy efficient products and services available for accelerated depreciation, governments can incentivise green practices in commercial buildings. Accelerated depreciation provides a significant financial incentive to the market and therefore will be very effective in increasing the uptake of green building practice. [10] **2. R&D tax concessions** Currently, there exists an R&D tax concession of 125% to provide incentives for innovation in green buildings. However, this level of concession is insufficient for Australian companies to invest in green building R&D[11]. The tax concession rate should be doubled to 250%. **3. Operations and maintenance** The government should ensure that every commercial building in Australia undergoes an energy audit by 2015, resulting in energy management practices for general operations and maintenance being enacted to minimise unnecessary energy consumption. The green building overhaul will soften energy demand, providing early reductions in greenhouse gas emissions and making it easier to transition to a renewable energy-powered economy over the next decade. Further, several measures as part of the overhaul will increase the capacity of buildings to cope with the impacts of climate change, such as extreme weather events. The green building overhaul will likely create tens of thousands of jobs, as modeling has shown that 20,000 jobs could be created in residential and commercial energy efficiency[12].
Strengthen building standards for all new buildings.	The building code of Australia should increase the minimum standard for new residential buildings from 5 to 7 stars, and mandate 5 stars for all new commercial buildings. Minimum standards must also be set for all other buildings (e.g. schools, hospitals, warehouses) in line with optimal energy savings potential. Beyond setting these immediate standards, the building code should be reviewed annually to continually improve the efficiency measures required to gain the mandatory star rating. These increasingly stringent requirements should be commensurate with the development and availability of energy efficiency technology.
Best practice energy efficiency standards for appliances and constant efficiency improvements.	A quarter of the average household's greenhouse emissions are the result of inefficient appliances and equipment[13], presenting a major opportunity to make energy and greenhouse emission reductions. The Minimum Energy Performance Standards (MEPS) program should be utilised to ensure constant improvement in energy efficiency by banning the least efficient appliances and equipment, allowing the most efficient to set the standard. MEPS should be introduced for all electrical appliances on the market, and be regularly reviewed to ensure the standard promoted is the most efficient available and to keep up with technological improvements.

[10] Green Building Council submission in response to the Green Paper on the Carbon Pollution Reduction Scheme. http://www.climatechange.gov.au/greenpaper/consultation/pubs/0496-green-building-council-of-australia.pdf
[11] *ibid.*
[12] Teske, S., Vincent, J., 2008, *Energy [R]evolution: A Sustainable Australia Energy Outlook*, Greenpeace Australia Pacific, P35. www.greenpeace.org.au/energyreport
[13] *Turning Down the Heat*, Climate Action Network of Australia Policy Document, 2007, p29

	MEPS should also be the mechanism to introduce a 1-watt standby industry standard for all new appliances, applicable from 2012. Standby accounts for at least 10% of household energy consumption[14], making a 1-watt standby industry standard a major contributor to turning around escalating household energy use. As a result, by 2012 the efficiency standards for equipment and appliances will be continually improving through competition, and a major drop in standby energy use will be observed, saving Australians billions in their electricity bills.
Fast-track the switch to a renewable-energy economy	
Stationary energy emissions have increased by nearly 50% between 1990 and 2007, now accounting for more than half of Australia's total greenhouse pollution[15]. In order to halve our emissions in the next decade, a rapid transition to renewable energy will be essential. Current policy settings and signals still allow the construction of new coal-fired electricity plants, despite coal-fired generation being the single-biggest source of greenhouse pollution[16]. *Australia has an abundance of renewable energy resources. By right, we should be leading the world in developing new renewable energy industries. Governments should send long-term, loud and legal signals to business, industry and the wider community, that Australia will move to a renewable-energy powered economy in the next decade, and implement the following measures in order to prepare Australia to make this transition.*	
Double the Renewable Energy Target to 90,000 GWh by 2020.	Given that the mandatory renewable energy target already exists and is a proven mechanism for developing renewable energy, a simple and expedient measure is to simply increase the target. The stated 45,000 GWh target of the Government fails to reflect the true potential of renewable energy to power Australia. Conservative modelling demonstrates that 82,000 GWh is entirely achievable[17]. As of October 2008, there were approximately 8 GW of renewable energy projects in the development pipeline[18]. Doubling the renewable energy target to 90,000 GWh would bring more of these projects online sooner, as well as stimulate industry development and expand manufacturing capacity. Flaws in the existing renewable energy target (including the rapid phase-out and inclusion of solar water heating, and eligibility of biomass burning native forests) should also be fixed.
Introduce gross feed-in tariffs to ensure rapid industry development of all renewable energy technologies.	The renewable energy target will favour more commercially developed and readily deployable technologies, providing little support to technologies that have more recently become commercially developed. Analyses of global renewable energy policies have found that feed-in tariffs are the most effective, and cost effective policy for developing renewable energy[19]. Rather than having to compete with more developed technologies within a renewable energy target, gross feed-in tariffs provide certainty to technologies such as solar PV, solar thermal, geothermal and ocean power that the market will allow them to reach their potential. Feed-in tariffs will also assist rapid industry development, incentivised to come online early while the tariff rate remains at its highest level. The Government should adopt the feed-in tariff model that turned Germany into a leader in renewable energy, employing 249,000 people in the industry[20]. The policy should be applied at a minimum to solar PV, solar thermal, geothermal and ocean power. Projects using these technologies would be driven by the feed-in tariff, rather than the renewable energy target scheme. The addition of a national gross feed-in tariff policy will also allow Australia's renewable energy generation to vastly exceed the 90,000 GWh prescribed for the renewable energy target.

[14] *Money isn't all you're saving*, Australia's Power Standby Strategy (2002-2012). Commonwealth of Australia, 2002. http://www.energyrating.gov.au/library/pubs/200212-standby.pdf
[15] Australia's national greenhouse accounts. National Greenhouse Gas Inventory, accounting for the KYOTO target. May 2009. http://www.climatechange.gov.au/inventory/2007/index.html
[16] Diesendorf, M., 2007, *Paths to a low-carbon future*, for Greenpeace Australia Pacific, p14 http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/paths-to-a-low-carbon-future.pdf
[17] Teske, S., Vincent, J., 2008, *Energy [R]evolution: A Sustainable Australia Energy Outlook*, Greenpeace Australia Pacific, p 44. www.greenpeace.org.au/energyreport
[18] ABARE electricity generation projects, October 08. http://www.abare.gov.au/publications_html/energy/energy_08/EG08_Oct.pdf
[19] Comission of the European Communities, *The support of electricity from renewable energy sources*, 2005.
[20] German Federal Ministry for the Environment, Conservation and Nuclear Safety, *Brief Overview of Wind Energy Use in Germany*. http://www.erneuerbare-energien.de/inhalt/42721/

Capital grants for large-scale renewable energy projects.	Several renewable energy technologies have the potential to meet Australia's base-load electricity needs[21]. Large-scale electricity plants of any kind would require assistance in the form of capital grants, and these should be made available to support large-scale renewable energy projects such as solar thermal, geothermal and sustainable biomass. The $1.3 billion provided in the 2008 budget to construct 1000 MW of solar power is welcome, and an appropriate support mechanism for large-scale solar power. However, a recent report indicated that Australia's potential for large-scale solar power is about 9000 MW of solar power by 2020[22], enough energy to supply more than four million homes. Capital grants, combined with measures such as gross feed-in tariffs, which provide long-term market certainty, will ensure that solar thermal, geothermal and other large-scale technologies power Australia much sooner, reaching their technical potential, and developing our expertise in a more diverse range of technologies. This will also quickly lower the cost of these technologies and create tens of thousands of new jobs.
Direct investment in restructuring the grid to support renewable-energy.	The electricity network is currently highly centralised, built to transfer electricity form large, fossil-fuel power stations to energy load centres such as major cities. Integral to the transition to a renewable energy-based electricity system will be grid restructuring to support a more decentralised, intelligent electricity network, and allow us to tap Australia's vast renewable energy resources. $24 billion is already to be spent on the electricity network over the coming few years[23] – this money should be spent on projects that support the fastest transition possible to a renewable energy-powered economy. Early intervention will be required to ensure that as the scaling up of renewable energy takes place, the network evolves with it. Given the segmented electricity network in Australia, combined with variable rules and regulations in different states and territories, it will require the Federal Government to drive changes in the electricity grid to support distributed generation and tap Australia's vast renewable energy resources.
Eliminate subsidies that encourage the use of fossil fuels, redirecting these funds towards restructuring the electricity network to support large-scale renewable energy.	Despite progress in the 2008 federal budget, where the fuel condensate subsidy was removed, there remains over $7 billion in annual Federal Government subsidies that encourage the use of fossil fuels[24]. At a time of severe environmental and economic stress, spending public money on activities that bring about environmental harm with no economic gain is unjustifiable. The CFMEU has noted: "there are no grounds in terms of equity, social justice or industry development to justify a significant subsidy to the mining industry"[25]. All federal and state government fossil fuel subsidies could be removed in the next 12 months, creating a softening effect on greenhouse gas emissions, as this would discourage the use of greenhouse-polluting fossil fuels. It would also free up billions of dollars of public money each year, which can be used to restructure the electricity network to support a decentralised energy system and allow us to tap our vast renewable energy resources.
Immediate moratorium on construction of new coal-fired electricity plant.	Halving our greenhouse gas emissions by 2020 will require reducing annual emissions by 320 million tonnes from current levels[26]. Given that a power station such as Hazelwood emits 17 million tonnes per year[27], adding any new coal-fired electricity plants onto the Australian grid is in contravention of common sense, and will make the task of halving emissions by 2020 all the more difficult.

[21] Referring to geothermal, solar thermal, wave energy, hydroelectric and sustainable biomass, all of which are able to provide a reliable supply of energy without intermittency.
[22] Richter, C., Teske, S., Short, R., Global Concentrating Solar Power Outlook 2009: Why Renewable Energy is Hot. Greenpeace International, European Solar Thermal Electricity Association and IEA SolarPACES, p58. http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/solarpoweroutlook-250509.pdf
[23] Calculations first cited by the Alternative Technology Association http://www.rpc.com.au/pdf/fit_position_statement.pdf
[24] Chris Riedy, 2007, Energy and Transport Subsidies in Australia: 2007 Update, Institute For Sustainable Futures and Greenpeace Australia Pacific. The figure of $7 billion is a conservative estimate, based on $7.8 billion of annual Federal Government Subsidies prior to the May 2008 Federal Budget, and removal of the fuel condensate subsidy in the May 2008 budget, worth an average $600 million over four years.
[25] CFMEU Mining and Energy division submission into fuel and energy, August 2008. http://www.aph.gov.au/SEnate/committee/fuelenergy_ctte/submissions/sub0021.pdf
[26] Based on 597 Mt in 2008, from Australia's national greenhouse accounts. National Greenhouse Gas Inventory, accounting for the KYOTO target. May 2009, p19, and 552 Mt in 1990, from Diesendorf, M., 2007, *Paths to a low-carbon future*, for Greenpeace Australia Pacific, p9
[27] WWF Australia press release, Hazelwood tops international list of dirty power stations, July 2005, ttp://www.wwf.org.au/news/n223/.

Plan to phase out existing coal-fired electricity plant starting with the oldest and most polluting.	Placing a moratorium on the construction of new coal-fired electricity plants will send a powerful signal to generators and retailers that they will be required to meet new energy needs from other sources. A moratorium could be enacted in the next 12 months. Beyond preventing the addition of any new coal-plant, the government should establish a plan for phasing out Australia's existing coal-fired power stations over the coming decade, based on gains made in renewable energy and energy efficiency. Wherever possible, the oldest and most polluting power stations should be phased out first. Modelling has shown that phasing out coal-fired electricity generation entirely in Australia could be achieved between 2020 and 2030[28]. This plan should be developed as soon as possible, in order to allow the coal-fired electricity generators and coal communities to best prepare for the transition to renewable energy.
Drive the shift to low emissions vehicles and sustainable cities	
Following the recent lead of Barack Obama and the United States, Australia should introduce mandatory efficiency standards for all new cars we manufacture. This would not only save money at the petrol station but also reduce our oil imports and help us slash our greenhouse emissions. *A new electric vehicle market beckons for whichever countries seize the opportunity. Strong investment in our public transport will create jobs and make leaving the car at home a viable choice for all. We can design our cities for ease of travel and local living, taking the stress out of the daily commute and lessening our impact on the environment.*	
Set binding targets for fuel efficiency and emissions intensity of Australian vehicles, as well as provide strong incentives to support electric vehicles.	In 2004, passenger vehicles in Australia were responsible for 41.7 million tonnes of greenhouse pollution[29], more than Bayswater and Hazelwood power stations combined. Australian vehicle fuel efficiency standards are set to fall well short of the voluntary target of 6.8L/100km by 2010. In fact, only one Australian manufactured car had an efficiency of less than 10L/100km in 2006[30]. Even if Australia were to meet its voluntary target, by 2010, China's binding standards would still make them 7% more efficient than Australia[31]. Voluntary targets have clearly failed and mandatory fuel efficiency and emissions intensity targets are required to ensure Australia's vehicles compete with the world's most efficient in the near future. The United States' target for fuel efficiency equates to approximately 6.6L / 100km by 2016[32]. The Jamieson Group recommended a target of 5L / 100 km by 2015, to be met in incremental stages[33]. Such a target should be adopted for Australia. The EU is reducing the average emissions intensity for new passenger vehicles from 160 grams per kilometre to 130 grams per kilometre in 2012[34]. This program will put the EU amongst the world's leading regions on emissions intensity, as well as bring significant financial savings to their vehicle owners[35]. Australia should also adopt the EU target by 2012, setting emissions standards for subsequent years that drive continual improvement in emissions intensity. In order to ensure the emissions intensity of Australia's vehicles continues to fall post 2012, governments should invest strongly in the production of electric vehicles. If 85% of Australia's passenger vehicles are plug-in hybrids by 2020, it would represent a 50% average fuel reduction per vehicle[36] and a major emissions saving.

[28] Teske, S., Vincent, J., 2008, *Energy [R]evolution: A Sustainable Australia Energy Outlook*, Greenpeace Australia Pacific. www.greenpeace.org.au/energyreport
[29] Diesendorf, M., 2007, *Paths to a low-carbon future*, for Greenpeace Australia Pacific, p15 http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/paths-to-a-low-carbon-future.pdf
[30] Australian Conservation Foundation Submission on Vehicle Fuel Efficiency, November2008, p5. http://www.environment.gov.au/settlements/transport/publications/vfe-paper/submissions/49acf.pdf
[31] Diesendorf M., Lamb D., Matthews J., Pearman G., *A roadmap for Alternative Fuels in Australia: Ending our Dependance on Oil*, Report to NRMA Motoring and Services, The Jamieson Group
[32] United States White House Press Secretary, May 2009 http://www.whitehouse.gov/the_press_office/President-Obama-Announces-National-Fuel-Efficiency-Policy/ calculations converted from 353.3 miles per gallon to 6.6 litres per 100 km.
[33] Diesendorf M., Lamb D., Matthews J., Pearman G., *A roadmap for Alternative Fuels in Australia: Ending our Dependance on Oil*, Report to NRMA Motoring and Services, The Jamieson Group
[34] European Union, Feb 2009. http://www.eurunion.org/News/eunewsletters/EUInsight/2009/EUInsight-Auto-Feb2009.pdf
[35] Australian Conservation Foundation Submission on Vehicle Fuel Efficiency, November2008, p5. http://www.environment.gov.au/settlements/transport/publications/vfe-paper/submissions/49acf.pdf
[36] Diesendorf, M., 2007, *Paths to a low-carbon future*, for Greenpeace Australia Pacific, p15. http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/paths-to-a-low-carbon-future.pdf

	Proving investment and certainty to Australia's automobile industry will allow it time to prepare for a large-scale roll out of low-emission vehicles over the next decade. It will also provide clear direction to an industry in need of revitalisation.
Providing incentives for sustainable transport.	A major modal shift from vehicles and air travel to sustainable transport will be vital to halving emissions by 2020. An innovative package of measures could maximise opportunities for sustainable transport, and provide incentives for Australians to use sustainable transport whenever possible. Such a package would include: • Offering tax deductions or higher rebates for those who purchase six or twelve-monthly travel passes. • Investing in public transport across our cities, as well as intra and inter-state public transport infrastructure including fast rail alternatives. • Firm targets to ensure public transport is accessible, reliable, frequent, connected, fast, comfortable, safe and affordable. • Significantly increase train, tram and bus services through increased rolling stock, better use of current infrastructure, and investment in infrastructure upgrades and extensions. • Significant commitment to developing an integrated and connected cycling network across our cities and regional centres coupled with end-of-journey facilities to encourage mode shift to cycling, particularly for short trips. • Investment in our rail freight network and development of intermodal hubs across our cities and regions to facilitate a widespread mode shift from road to rail freight. • Development of freight efficiency programs including Collaborative Distribution programs whereby companies share logistics and distribution networks, services and facilities to cut distribution and supply chain costs and, most importantly, the associated greenhouse gas emissions.
Making sustainable transport a part of everyday living.	The desire to use sustainable transport amongst Australians has risen markedly in recent years. Melbourne's train network patronage has grown 30% in the past three years, while the city's cycling journeys to work grew by 42% in the five years to 2007[37]. A package to promote sustainable transport in urban areas should be developed and implemented immediately, including: • Major investment in urban sustainable transport infrastructure including public transport, cycling and walking infrastructure, particularly in developed areas currently un-serviced and in new growth areas. • Infrastructure and service improvements to continue positive trends in those areas where services are overcrowded or infrequent • Commit to sustainable urban planning, land-use and design. Through improved design of our cities and decisions about land-use, governments can ensure people need to travel less distance, less often. By ensuring services and employment close to home, the number and distance of journeys can be significantly reduced. Through redevelopment of activity districts and along sustainable transport routes (i.e. along tram routes) trips can be shifted away from private motor vehicle travel to cycling, walking and public transport. • Commit to urban consolidation and an end to urban sprawl, which creates, increased transport demand. • Actively seek to increase average vehicle occupancy through high-occupancy transit lanes, supporting car pooling programs, introducing behavior change programs, and introducing pricing signals such as congestion charges to create a disincentive for private vehicle travel where appropriate.

Protect our forests and woodlands as a carbon store and make agriculture a part of the solution

Australia's forests, woodlands, wetlands and mangroves are established habitats for native species, a precious natural heritage and a massive store of carbon. Protecting nature is a smart climate change solution – reducing emissions and building natures' resilience against climate change.

[37] Connex, 2008, *A better harder working network for more customers.* Media Release, 9th April. Downloadable at http://www.connexmelbourne.com.au/news.php?newsid=243&g=Array and Cycling Promotion Fund, 2008, Submission to the Garnaut Climate Change Review *Transport Planning and the Built Environment*, pg.2. Downloadable from http://www.garnautreview.org.au/

New economic opportunities for rural and remote Australia can be through improved, climate friendly farming practices, sequestration benefits provided by protecting, rather than logging and clearing forests and woodlands and through benefits to indigenous and non indigenous communities through reduced burning practices in the northern savannahs. *Our farmers need support to become a part of the solution as they grapple with climate change and drought. Helping them to adopt more sustainable farming practices will not only reduce emissions, but also increase our productivity and the resilience of the Australian agricultural industry to climate impacts such as drought.*	
End logging of old growth forests and high conservation value native forests in favour of plantation harvesting by the end of 2011.	Net emissions from land use, land use change and forestry were 56 million tonnes in 2007[38]. It is estimated that about 40 million tonnes of these emissions are created by logging old-growth forests[39]. The Australian government has yet to accurately measure emissions from native forest logging because Australia has opted not to account for forest management under article 3.4 of the Kyoto Protocol[40]. Logging of fully mature forests is vastly more greenhouse-intensive than plantation harvests. Mature Tasmanian Mountain Ash forests typically store three times the amount of carbon than forests on an 80-year logging rotation[41]. Transitioning the forestry industry away from native commodity wood production in NSW, Victoria and most of Tasmania could be achieved over the next two years at a cost of about $500 million[42], making it one of the lowest cost options for reducing greenhouse gas emissions in Australia. Furthermore, moving from old growth and high-conservation value forests to plantation logging will permanently direct logging operations away from forests that are the highest stores of carbon. The timber industry is under great financial stress and a package which facilitated transition for wood production jobs to the plantation sector would improve the overall health of the wood and wood products industry and minimise job losses. Jobs could also be created through improving fire management to maximise long-term resilience of forest ecosystems to changing fire regimes. The transition should be fully completed by the end of 2011, preventing the release of some of Australia's largest carbon stores, as well as vital components of Australian habitat.
End major land clearing of Australia's mature and regrowth forests, woodlands and grasslands by the end of 2011.	Land clearing was responsible for about 77 million tonnes of greenhouse gas emissions in 2007[43]. Land clearing also reduces the adaptive capacity of landscapes to withstand climate impacts such as drought. A COAG agreement is urgently needed to significantly tighten state native vegetation laws to drastically reduce the national rate of clearing, which is estimated to be approximately 350, 000 hectares per annum in recent years[44]. This will dramatically curtail Australia's greenhouse gas emissions, as well as make Australia's land more resistant to the impacts of climate change.
Encourage private landholders to reduce emissions from clearing and degradation and to protect and restore carbon stocks in native vegetation.	Queensland and NSW both contain significant areas of re-growth forest and woodlands that are now significant carbon stores. There is no mechanism to protect these carbon stocks and prevent GHG emissions from clearing. 16 million hectares of re-growth is at risk of clearing in Qld alone. Tax incentives should be developed to encourage all private landholders and leaseholders to restore the natural carbon carrying capacity of their forests and woodlands.
Support improved fire management in large intact landscapes.	Fire management in extensive, intact natural landscapes is emerging as a critical GHG issue.

[38] Australia's national greenhouse accounts. National Greenhouse Gas Inventory, accounting for the KYOTO target. May 2009, p15
[39] The Wilderness Society, Submission to the Carbon Pollution Reduction Scheme Green Paper, p19 http://www.climatechange.gov.au/greenpaper/consultation/pubs/0540-the-wilderness-society.pdf
[40] Australian government, 2008, CPRS Green Paper, p127. http://www.climatechange.gov.au/greenpaper/report/pubs/greenpaper-ch2.pdf
[41] Dean, C., Mackey, B.G., and Roxburgh, S.H. (2003), Growth Modelling of Eucalyptus regnans for carbon accounting at the landscape scale, In Modelling Forest systems, Edited by Amaro, A., Reed, D., Soares, P. , 2003 CABI Publishing, pp 27-39.
[42] The Wilderness Society, Submission to the Carbon Pollution Reduction Scheme Green Paper, based on 2004 figures prepared by Gillespie Economics, p17 http://www.climatechange.gov.au/greenpaper/consultation/pubs/0540-the-wilderness-society.pdf
[43] National Greenhouse gas inventory 2007, p15. Note: estimated net emissions in 2007 from deforestation minus afforestation and refprestation was 56 million tonnes.
[44] Based on a tally of approved land clearing by states in recent years, M. Taylor, WWF, pers. Comm.

	The change in fire management across Northern Australia associated with grazing and other land management practices means that fires are more intense and more extensive than under indigenous management. Kyoto accounting methods significantly underestimate the greenhouse gas emissions from land clearing and forest fires. For example, recent published research has estimated that GHG emissions released through savannah burning contributed 38.5% of Australian net greenhouse emissions in 2004[45]. Programs in western Arnhem land, which restore traditional fire management, have demonstrated a significant reduction in GHG emissions. Bringing these schemes into a national capped offsets scheme that contributes to Australia's GHG reduction targets should be a mitigation priority Employment opportunities and financial benefits for indigenous communities will be significant.
Promote climate mitigation initiatives with the widest range of ecological benefits.	Landscape conservation initiatives which protect and restore ecological connections and processes, including carbon should be encouraged through taxation incentives and preferential treatment in carbon offset schemes
Establish a fund to facilitate reduction of gross emissions from logging, land clearing and fire and to improve sequestration and long-term carbon storage in natural ecosystems.	Taxation incentives should be established which clearly differentiate between schemes which foster ecological restoration of damaged natural ecosystems and so called carbon plantings of monocultures of trees. A sliding scale of taxation benefits should be established with the greatest benefit going to landholders who contribute the most to the widest range of ecological benefits.
Funds for programs that minimise carbon and energy intensity of farming and agriculture.	Agriculture is a vital component of the Australian economy, providing 3% Australia's GDP[46]. However, the agricultural sector is on the front line of climate change, facing impacts such as drought and dwindling water resources, which threaten its viability. Achieving deep cuts in agricultural emissions will require implementing a range of measures that reduce the carbon intensity of agriculture. A fund should be established between State and Federal Governments and a program initiated to reach every farm in Australia, ensuring that the following measures can, where possible, be implemented: • Restoration of natural vegetation on farming land • Restoring cultivated organic soils • Minimising soil disturbance • Increasing soil carbon stocks • Fertiliser management • Livestock management This program should begin by the middle of 2010, and aim to reach every farm in Australia by 2015. This will have the combined benefits of reducing greenhouse emissions, increasing the resilience of Australian agriculture and increasing productivity relative to inputs. Australia should have the methodologies to measure and account for GHG reductions in this sector fully functional by 2017 so that full land based accounting could be incorporated into any international climate agreement.

Grow the green job economy

Globally the economic powerhouses of the 21st century will be those countries that have seen the writing on the wall and have made the early transition to green jobs and low-emissions industries. Australia could be one of the early movers and reap the fruitful rewards. However, these jobs and industries won't emerge fast enough on their own. We need to identify and support them through deliberate policy measures and industry development packages.

[45] International Journal of Wildland Fire, 2007, 16, 361–377

[46] Department of climate change, *Australia's Agriculture: the impacts of climate change*. http://www.climatechange.gov.au/impacts/agriculture.html

We can implement a plan to create new jobs and industries, make existing jobs greener and develop the workforce training and skills these industries will need. Governments must also look after communities adversely affected by the transition away from emissions-intensive activities, making them as much a part of a prosperous, low-emission economy as possible. Up to 847,000 green collar jobs could be created in Australia by 2030, given the right policy incentives and early action[47]. The Green Jobs and Industries plan will: • *Identify Australia's industries of focus in green jobs* • *Develop policy to support the rapid development of these industries* • *Assess work force and training needs of these green industries* • *Explore opportunities to green existing industries and jobs* • *Identifies barriers and opportunities in developing new green industries.*	
Regional development incentives to protect and develop communities reliant on emissions-intensive industries.	In order to maintain the stability of Australia's economic geography, and the social fabric of many Australian regions, communities currently dependent on emissions-intensive industries should be prioritised for clean industry development opportunities. A 2008 report demonstrated that the Hunter Valley in New South Wales, Australia's largest coal-producing region, could transition to become a hub for renewable energy, providing an additional 14,290 jobs by 2020[48]. Such opportunities in manufacturing, renewable energy production and other industries should be created in regions currently home to emissions-intensive industry wherever possible. The Federal Government must develop a strategy, working closely with community leaders in regions home to emissions-intensive industries, to identify and deliver new industry development in those regions.
Support packages for affected communities.	In addition to providing new opportunities to regions that will be adversely affected by the transition to a renewable energy-based economy, a responsible government will conduct an audit of existing skills and resources, and develop a plan to support individuals and families in transitioning to a low-carbon economy. Included in support packages will be: • Retraining and skills development • Direct income support • Priority access to employment services • Broad support for community services and facilities that may be affected by demographic and social changes due to the transition. As a result of this measure, every individual and family in a community dependant on emissions-intensive industry will be provided the best possible opportunity to gain employment in new clean-energy industry, broaden their skills and manage their role comfortably in the transition to as low-carbon economy.
Prioritising low-income households for energy efficiency programs.	Any disturbance to energy prices should be mitigated through energy efficiency measures, which counteract the effect of price increases. Similarly, investment in a national sustainable transport network would provide an affordable and sustainable transport alternative to car dependence and rising petrol prices. Low-income households will be most vulnerable to energy price disturbance, and will require prioritisation for energy savings measures in electricity, as well as through access to sustainable transport. This measure would be enacted as part of the Energy Savings program, which provides fully financed retrofits for low-income households (see section 1). The aim of providing low-income households priority access to energy efficient technologies and measures is to ensure their transition to a low-carbon economy is, at a minimum, cost-neutral.
Increase Australia's manufacturing capacity to deliver a renewable energy-powered economy.	Transforming to a renewable energy-based electricity supply over the next decade will require a major expansion of our manufacturing capacity, in order to ensure the required rate of renewable energy production and installation can be met. The Government should conduct an analysis into the required rates of manufacturing necessary to meet ambitious targets set through the renewable energy target scheme, and complementary feed-in tariffs for large-scale renewable energy.

[47] Australian Conservation Foundation and the Australian Council of Trade Unions, *Green Gold Rush: How Ambitious Environmental Policy can make Australia a Leader in the Global Race for Green Jobs*, p3. http://www.acfonline.org.au/uploads/res/Green_Gold_Rush_final.pdf

[48] Centre for Full Employment and Equity, Policy Report, 2008, *A Just Transition to a Renewable Energy Economy in the Hunter Region*, for Greenpeace Australia Pacific, p 6. http://www.greenpeace.org/raw/content/australia/resources/reports/climate-change/just-transition-report.pdf

	The Green Jobs plan should ensure that Australia's manufacturing capacity meets these needs This plan should incorporate prioritising regions currently home to emissions-intensive industries for new opportunities in manufacturing of renewable energy and energy efficiency technology.
Introduce courses, apprenticeships and other skills development programs that will train green collar workforce.	It is estimated that moving to a 40% renewable energy supply over the next decade would create approximately 72,000 jobs in renewable energy and energy efficiency alone[49]. It is therefore reasonable to suggest that moving to a renewable energy-based electricity supply would create hundreds of thousands of jobs over the next decade, as Australia moves to halve its greenhouse pollution. The Education and Skills Ministries, and broader education sector should lead the development of a strategy to ensure Australia trains and builds a green collar workforce, capable of bringing about the necessary changes to drive deep cuts in emissions. This strategy could be completed within 6 months, incorporating: • Roll out of a major green-job apprenticeship program • Development of tertiary courses in low-carbon industries and businesses • Opportunities for green on-the-job training • Education and up-skilling in specialist sectors, such as electricians and plumbers. This plan will result in the greening of Australia's existing workforce, as well as allowing many young Australians to take up the tens of thousands of green jobs that will be created as part of a low-carbon economy.

[49] Teske, S., Vincent, J., 2008, *Energy [R]evolution: A Sustainable Australia Energy Outlook*, Greenpeace Australia Pacific. www.greenpeace.org.au/energyreport