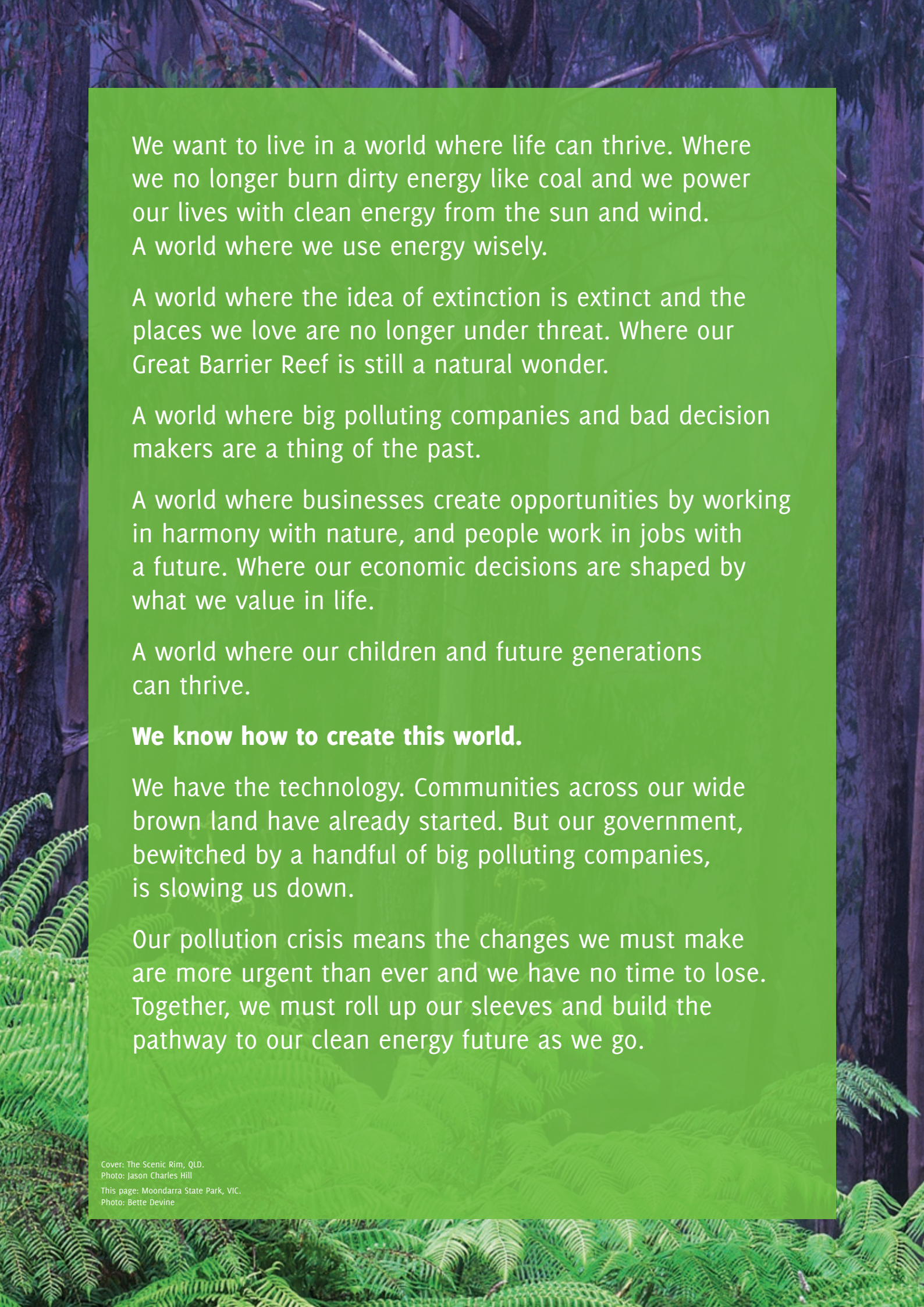


We love a sun-powered country

Our vision for a clean energy future



**AUSTRALIAN
CONSERVATION
FOUNDATION**



We want to live in a world where life can thrive. Where we no longer burn dirty energy like coal and we power our lives with clean energy from the sun and wind. A world where we use energy wisely.

A world where the idea of extinction is extinct and the places we love are no longer under threat. Where our Great Barrier Reef is still a natural wonder.

A world where big polluting companies and bad decision makers are a thing of the past.


A world where businesses create opportunities by working in harmony with nature, and people work in jobs with a future. Where our economic decisions are shaped by what we value in life.

A world where our children and future generations can thrive.

We know how to create this world.

We have the technology. Communities across our wide brown land have already started. But our government, bewitched by a handful of big polluting companies, is slowing us down.

Our pollution crisis means the changes we must make are more urgent than ever and we have no time to lose. Together, we must roll up our sleeves and build the pathway to our clean energy future as we go.



We're calling on our federal government to commit to deliver a national Clean Energy Transformation Plan so Australia can shift to 100 per cent clean energy, transition away from the dirty energy of the past, and use energy wisely.

Our government must urgently take the lead to transform how Australia generates and uses energy. We need a national plan so we can:

Go 100% clean energy

- Set a target for clean, renewable energy to power 100% of Australia's electricity by 2035, and 100% of all our energy (electricity, transport and industrial processes) by 2050
- Set strong, durable policies including an expanded renewable energy target scheme
- Help communities with resources to build renewable energy in Australia's towns and suburbs
- Keep and strengthen the Clean Energy Finance Corporation and Australian Renewable Energy Agency
- Build clean energy infrastructure including more public transport, high speed rail across the country and electric vehicle charging stations
- Reboot the National Energy Market with new objectives, rules, laws and market structures that support a clean energy transformation.

Shift away from polluting coal, oil and gas

- Commit to the phased closure of all of Australia's dirty coal-burning power stations
- Ensure funding to fairly support people and communities impacted by closing power stations and mines to transition to jobs and industries for the future
- Stop approvals for new or expanded coal mines, and hold companies accountable to rehabilitate the toxic mess they've left in old mine sites
- End fossil fuel subsidies and tax breaks for pollution.

Use energy wisely

- Set a target and strategy to at least double Australia's energy productivity by 2030 across households, business and industry
- Clean up Australia's vehicle fleet with strong pollution standards starting in 2017
- Implement best practice standards for appliances and buildings.

These three pillars are key foundations for our future and cannot be rolled out in isolation. They must be linked to strong climate pollution reduction targets that limit global warming to less than 1.5°C, and a long-term market or regulatory mechanism to efficiently and permanently cut pollution. Our government must commit to this plan immediately and implement it urgently.



The story of energy

How we harness energy to power our lives has a big impact on our planet – but we’re always discovering better ways to meet our needs. We can rapidly stop digging up and burning dirty energy like coal, oil and gas. We have the technology and all the sun, wind and waves we need.

We’re always discovering new ways to harness energy and power our lives. In the past, people invented windmills to capture the wind and grind their food. They figured out how to use steam to power engines and replace the muscles of horses. By taming energy, they could make light and stay warm, fly over oceans and run an ever-increasing array of useful machines.

People also worked out how to generate energy by burning ‘fossil fuels’ – the remains of living things. Long ago, before these ancient plants and creatures could break down, they sunk to the bottom of swamps and were buried under sand and clay. Intense heat and pressure squashed their fossilised remains, and the carbon still stored in their cell walls became rocks of coal, pockets of gas and underground lakes of thick, gooey oil.

Our pollution problem

People rushed to dig, drill, suck and burn this sea of energy-rich, buried treasure. Mines popped up everywhere. Companies built power station after power station and exported coal by the freighter.

Scientists have warned us for decades. The masses of carbon these companies are pumping into our skies acts like a blanket, trapping the sun’s heat and fuelling global warming. It is polluting our skies and profoundly damaging our climate. It is poisoning our air and water and uprooting communities. It has set off an extinction crisis and is breeding ever worse droughts, bushfires and floods.

Despite these warnings big polluting companies, keen to make a quick buck, keep on burning coal, gas and oil.

Right now, we are experiencing the consequences of these energy choices. Our bush is burning. Our seas are rising. Our farmland is baking. Our reef is dying. We can’t let this go on.



Big polluters and bewitched politicians

In Australia, every single day, a handful of companies pump pollution into our skies. While the rest of the world rushes to close coal-burning power stations and build wind and solar farms, Australia's pollution is increasing. Our government is doing little to stop it.

These big polluting companies are also polluting our democracy. They have formed a powerful lobby with deep pockets to peddle misinformation and influence public policy. They have rigged the rules in their favour.

We don't accept these companies damaging our world to make a quick buck. We don't accept the short-term thinking. The vested interests. The subsidised destruction. The politicians who forget they represent the people.

We don't accept the story that we must poison the well we drink from.

We know how to fix our pollution problem

Just as we invented the internet and electric cars, we're always finding better ways to meet our needs. We can completely transform how we use and generate energy. We've done it before. Communities across Australia have already started.

But there's a bottleneck: a lack of political will. The will to make laws that force polluting companies to massively cut pollution. To remove billions of dollars from fossil fuel subsidies and invest that money in clean energy. To stop the vested interests holding us back, and plan for the future. The kind of will that put people on the moon.

The Clean Energy Transformation Plan

We're calling on the federal government to urgently commit to lead a national Clean Energy Transformation Plan so we can:

- 1 Go 100% clean energy
- 2 Shift away from the dirty energy of the past
- 3 Use energy wisely

1. Go 100% clean energy



Without fail, the sun shows up in the sky every single day. In just six hours, it gives our deserts more energy than the entire world uses in a year. Taking a small portion of that energy and converting it into electricity just makes sense.

We love a sun-powered country

Energy from the sun, wind and waves is clean and abundant. It will never run out. It doesn't pollute the air we breathe or the water we drink. With it, we can power our lives without damaging our world.

We already have the technology to shift to 100 per cent clean energy. In Australia, until now, communities have taken the lead. Today, more than one in five households capture the sun on their rooftops. Some 23 million solar panels are harvesting sunshine, right across our big brown land. That's a panel for nearly every single person in the country.

Lismore City Council is one of many Australian communities planning to shift to 100 per cent local clean energy within ten years. The Council is massively reducing the amount of energy the city uses and plans to build a large-scale community solar farm to power households and businesses in the region.

But the government and big polluters are holding clean energy back

Over the past few years, the federal government has senselessly attacked wind farms, the laws to make polluters pay, the Renewable Energy Target, agencies created to help investment and even science itself. In 2014, large-scale investment in clean energy dropped by 88 per cent. Jobs in renewable industries plummeted.

Today, it seems the government still can't see beyond the coal dust and big money of the big polluting companies.

Solar panels at The Wharf in Sydney, NSW.
Photo: Sue Murray



We can shift to 100% clean energy

To solve our pollution problem and stop fuelling global warming, we must urgently shift to 100 per cent clean energy. This means changing how we generate electricity so it's clean and renewable, and update our transport systems, houses, businesses and industrial processes so they can run on that clean electricity.

As we cut pollution from coal, we must also phase out gas and oil drilling, reject nuclear power and stop mining and exporting uranium. Dirty and dangerous energy belongs in the past, not the clean energy future.

The future looks bright

Tomorrow, communities will capture sunlight and store it in batteries. We will drive electric cars on roads paved with solar panels and travel on wind-powered trains. (France and the Netherlands are already doing this!)

We will electrify big industrial processes so they stop guzzling coal, gas and oil and power them with huge city-scale sunshine harvesting facilities.

Our new electricity grid will be distributed, intelligent, networked and flexible – more like the internet than the clunky old thing of the past. We will power all houses, factories and skyscrapers with solar cells and everyone will be able to produce and sell the sunshine they harvest from their own rooftops.

Our government must lead the way

Polling shows Australian people want our governments to lead the shift. This means our politicians must listen to the people who elect them, not the vested interests of big polluting companies. They must:

- Set strong targets to put Australia on the path to 100 per cent clean energy
- Finance and support investment in renewable energy projects and emerging technology
- Reform the energy market and national grid
- Build clean energy infrastructure like public transport and high speed rail to connect our major cities
- Support local clean energy infrastructure like charging stations for electric vehicles.

2. Shift away from dirty energy



Despite our abundant sun and wind, last year just 10 companies in Australia pumped more climate pollution into our skies than Switzerland, Denmark and Ireland combined. These companies are Australia's biggest polluters – all energy and mining giants who dig up, burn or export dirty energy like coal.

Why must we shift away from dirty energy?

Australia is home to some of the world's dirtiest coal-burning power stations. Every day, these clunkers pump out tonnes of pollution, destroying our reefs, unleashing an extinction crisis, brewing extreme weather and fuelling global warming.

This pollution is also making people sick. In underground Queensland mines today, people have started to get 'black lung' again from breathing in coal dust – an incurable occupational lung disease that belongs in a Dickens novel, not the twenty-first century.

As well as phasing out coal-burning power stations, we must stop exporting coal and put an end to mining and drilling other dirty energy like unconventional gas and oil. In every way, renewable energy is a better choice.

Phasing out dirty energy is possible – it's happening around the world

At the 2015 UN climate summit in Paris, world leaders agreed to massively cut pollution and shift to clean energy. The rest of the world is abandoning coal as a source of electricity, fast.

In the United States, 200 coal-burning power plants have closed or are closing, with more to follow. The United Kingdom plans to phase out all of its coal by 2025 and China has announced it will close 1,254 coal mines in 2016. Scotland has already burnt its last lump of coal for electricity.

We've overcome powerful vested interests for the public good before, and we can do it again. Big Tobacco knew smoking caused cancer but advertised aggressively and tried to spread doubt. Companies like James Hardie continued to mine and sell asbestos, even as they tried to cover up the deadly consequences.

Big Tobacco and asbestos companies now face a tsunami of litigation and regulation. The Australian government has banned asbestos and is a world leader in curbing tobacco use. Pollution must be next.

Port Kembla Coal Terminal, NSW.
Photo: Ali Sanderson



But Australian politicians are dragging their heels

Connections between Australian politicians and the dirty energy industries run deep. Through their immense lobbying power, several of the big polluting companies are influencing government decisions to block the shift to clean energy.

Other polluters accept that dirty energy like coal and gas is a thing of the past. Some of them talk about mothballing their coal-burning power stations over the next few decades, but snail-paced change is not an option.

If we leave the shift up to the big polluters, they will keep rigging the rules in their favour to make a quick buck, and continue to damage our climate.

Our thriving, pollution-free future

Australia is facing a 'Kodak moment'. The age of film photography didn't end because we ran out of film or analogue cameras, but because we rapidly improved digital technology. New industries blossomed. Companies like Kodak, the leading analogue camera maker, tried to ignore change, but were quickly left behind.

Without coal, we will thrive. Other countries are already doing it – we can too.

We can phase out dirty energy in Australia

Our federal government must stand up to these companies and urgently take the lead to:

- Phase out coal-burning power stations and coal mines
- Not approve any new or expanded mines or gas or oil drilling operations
- Hold the big polluters to account so they rehabilitate the toxic lakes and gaping wounds they've left in old mine sites
- Stop giving big polluting companies subsidies and handouts – effectively paying them to pollute
- Help people who work in dirty energy industries and their communities to transition to new jobs and industries with a future.

3. Use energy wisely



Even though we're always finding clever ways to use much less energy and cut energy waste, right now, we use it like there's no tomorrow.

We waste a colossal amount of energy. Big cars guzzle petrol by the litre and cough out fumes. Leaky houses full of stuff silently suck electricity. Supersized factories and manufacturing processes devour it. We make mounds of energy-hungry plastic spoons we use only once, then throw in the bin.

Why does energy efficiency matter?

Especially when we power our lives with energy like coal and gas, reducing the amount we use and waste is critical to cutting pollution.

The International Energy Agency has done the sums: if we make industry across the world more efficient – and use the energy those sectors are currently wasting – we can save the equivalent of all the electricity the United States and China use, combined.

As we move to clean energy, using energy wisely is as important as ever. In the coming years, we will electrify cars, trains and factories so they can run on clean energy instead of coal, oil and gas. Although the amount of electricity we use will go up, by cutting waste, we won't need to generate as much.

We know how to use energy wisely and cut waste

Over the past 40 years, the American state of California massively cut its energy waste through energy-saving programs, building codes, cutting edge technology and minimum standards for vehicles, fuel and appliances.

While energy use across the rest of the US has skyrocketed, by reducing energy, Californians have avoided building more than 30 large power plants.

In nature, there's no such thing as waste. Everything and everybody is part of a system of relationships. A tree's waste is the air we breathe. Insects on the forest floor use leaf litter as homes and food. When the leaves rot and the insects die, they become nutrients for the soil, in which future trees can grow. There's no such thing as rubbish or pollution.

To solve our pollution problem, we need to learn from nature and get rid of waste. We can create systems that reuse what one process discards as the input for another. We can make everything renewable and non-polluting.



Energy wisdom in the future

With the right policies, energy guzzling appliances will go the way of cassette tapes and floppy disks. Our buildings will be so well built, they will be warm in winter and cool in summer with nearly no heating or cooling.

The new grid will be a smart, distributed and flexible system. We will click onto our individual networks to see our energy data – down to every plugged in device – and adjust our use to save energy and suit our needs. We will automatically unplug the TV because it's sucking energy even though it's switched off.

Bikes and trains will make a comeback and we will plan our cities so they make sense. We will charge our cars with 100 per cent clean energy and drive them on congestion-free solar-panelled roads. Our air will be cleaner, our electricity affordable and our lives brighter.

Our government must lead the way

We have already invented a whole range of highly efficient appliances, processes and machines – we need to start using them.

Just like California, our state and federal governments must step up, take the lead and:

- Introduce policies and set targets to make energy efficiency an everyday part of life
- Create and continually improve appliance, vehicle and fuel standards
- Make good planning regulations and building standards and introduce programs to retrofit existing buildings
- Electrify our transport systems and make them highly efficient
- Drive industries to replace clunky old machines with cutting edge, clean industrial processes that capture and reuse the heat they generate
- Plant trees to shade our houses and cities.

Tawny Frogmouth.
Photo: Bill Collison Flickr CC

Everyone has a role



Clean energy won't grow simply by wishing for it. We must roll up our sleeves and transform how Australia makes and uses energy. Our pollution crisis means we have to move fast and build the path to a brighter future as we go.

Our government must lead the way

Our federal government needs to set the national agenda to put Australia on a path to 100% clean energy. It must make and implement a national Clean Energy Transformation Plan so we can shift to clean energy, cut pollution and use energy wisely.

Business and industry have a crucial role

Businesses and industry can embrace the opportunities of clean energy and plan ahead for changes on the horizon. Businesses of all sizes can update their business models and operations to cut pollution – from local newsagents putting timers on drinks fridges so they turn off overnight while remaining cool, to supermarket chains making whole fleets of refrigerated transport run efficiently on clean energy. They can power their operations with wind and solar and update their processes to reduce waste. They can implement transition plans and retrain people for jobs for the future.

What can people and communities do?

People can put solar panels on their rooftops and help communities grow wind farms. They can rally their local schools, football clubs, mothers' groups, churches and neighbourhoods to get involved.

People can switch to energy retailers that support clean energy and dump the banks, superannuation funds and power companies that don't. They can use less energy, take public transport, ride bikes, get electric cars and power them with renewable energy.

Everyone should demand their elected representatives replace dirty coal with both small-scale and city-scale sunshine harvesters. They can join the wave of people power. Vote for a brighter future. Sow the seeds of change.



Jack Ritchie at Maddens Falls, NSW.
Photo: Ali Sanderson



The Australian Conservation Foundation is Australia's national environment group. We are a community of people advocating for a healthy environment, a safe climate and a better life for all.

Sandridge Outstation, Rumburriya Country, NT.
Photo: Karl Goodsell



We're creating a brighter future

We know how to solve our climate pollution crisis. We have the solutions and the technology. We can stop burning coal, gas and oil and harvest 100 per cent of our energy from the sun and wind. Communities across Australia are already doing it.

Right now, a handful of big polluting companies are digging up and burning dirty energy like coal, oil and gas. They are damaging our climate and fuelling global warming. They have also polluted our democracy and rigged the rules in their favour.

This has to stop.

That's why we're calling on our government to urgently take the lead to transform how Australia generates and uses energy.

Let's power our lives with 100 per cent clean energy – energy that's abundant and empowers everyone to meet their needs, wherever they are, without damaging our lives.

We want our government to step up and lead as we build a path to a brighter future for our children and future generations – a future where all life can thrive.

Get involved! Visit: www.acf.org.au

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Printed on 100% post-consumer recycled paper by Moule Print,
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Authorised by Kelly O'Shanassy, ACF, 1/60 Leicester Street,
Carlton VIC 3053. April 2016



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