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# A PLAN TO REPOWER AUSTRALIA

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**100% Clean Energy**  
Let's get on with it!

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Homegrown Power Plan Version 2





# 100% RENEWABLE. 100% DOABLE. 100% BETTER.

**R**epowering Australia with clean energy will create a better life for everyone. Upgrading our energy system will help us fix damage to our climate. It will bring cleaner air, better jobs, and help us all control our energy bills.

But right now, a few polluting energy companies are locking us into old technologies they control. These companies and the politicians in their pockets are holding back change.

To hoard more profits they are pumping pollution into our skies, making people sick and putting our whole world at risk.

The good news is we can take back control with clean energy for everyone. We must stand up for solutions that support people and communities, not big polluters. We all want to keep enjoying life on our beautiful planet – with abundant coral reefs, clean air and thriving communities.

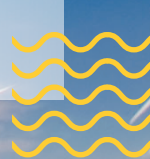
To do this we need to move beyond burning coal and gas. We must upgrade our old energy system, ensuring a just transition for workers and communities, and ramp up our efforts to harvest the power of the sun and the wind.

We already have the technology, skills and solutions to do this. We need to get on with it!

Solar, wind and storage are clean, cheaper than coal, and reliable. Australia's people and many Australian companies are leading the way. Now it's time for our elected representatives to catch up.

That's why we've created a second version of the Homegrown Power Plan: *A Plan to Repower Australia: 100% Clean Energy, Let's get on with it!*

The original Homegrown Power Plan was a project of GetUp and Solar Citizens and was released in 2016. This version is a joint project between the Australian Conservation Foundation, GetUp!, Solar Citizens, the Nature Conservation Council, Environment Victoria, and 350.org. It has been authored by the Community Power Agency. 'The Repower Australia Plan' outlines how we can repower the country with clean energy, rewrite the rules of our failing electricity system and replace the polluters holding us back.





# REPOWERING AUSTRALIA IN THREE PARTS:

All Australians, no matter what they earn or where they live, deserve access to affordable clean energy. Unfortunately some parts of our community face barriers that block them from benefiting from the renewable revolution. The Repower Australia Plan outlines how we can overcome these barriers and reach a 100% clean energy future.

## 1 Rewrite the rules

**Rewire our laws to deliver affordable, 100% clean electricity.**

- Stop old energy dinosaurs from squashing their cleaner competitors
- Reward people for contributing to the energy system instead of punishing them so they flee the grid
- Secure affordable electricity and a fair go for electricity consumers, whether they have solar or not.

## 2 Repower the country

**Turbo-charge our existing clean energy policies and add some missing parts.**

- Ramp up clean energy, storage and energy efficiency
- Enable an inclusive people-powered energy revolution, where everyone shares in the benefits of clean energy
- Make Australia a renewable superpower for good by exporting clean energy to the world.

## 3 Replace the polluters

**Stop companies burning fuels like coal and gas.**

- Plan the gradual, orderly closure of coal-fired power with a just transition for workers and communities
- Stop the health hazards of burning coal by introducing pollution standards with teeth
- Support households, industry and our power sector to get off expensive and polluting gas.



Photo: Pingala Solar

# THE REPOWER AUSTRALIA PLAN



## REPLACE THE POLLUTERS, ENSURING CLEAN ENERGY ISN'T HELD BACK BY THE LEGACY OF A BYGONE ERA.

Plan the orderly closure of coal-burning power with a just transition for workers and communities

Help households, industry and our power sector quit polluting and expensive gas for good

Stop the health hazards of burning coal by introducing pollution standards with teeth



## REWRITE THE RULES, REWIRING OUR LAWS TO DELIVER AFFORDABLE, 100% RENEWABLE ELECTRICITY.

Stop old energy dinosaurs from squashing their cleaner competitors

Make clean energy accessible for all energy users, whether they have solar or not

Reward people for contributing to the system instead of punishing them so they flee the grid



## REPOWER THE COUNTRY WITH CLEAN ENERGY AND MAKE AUSTRALIA A RENEWABLE SUPERPOWER.



Use our abundant wind and sun to power households and industries in Australia and around the world

Improve energy efficiency, making the transition easier and more affordable for everyone

Enable a people-powered energy revolution where everyone benefits from clean, affordable energy





# 100% DOABLE

**Experts agree that shifting to an energy system powered by the sun and wind is technically feasible and economically responsible. Nine different expert organisations, from the University of New South Wales to the Australian Energy Market Operator, have all conducted studies that show 100% renewable energy for Australia is 100% doable.**

## We can do this!

Research from the Institute for Sustainable Futures (ISF) at the University of Technology Sydney shows:

- By 2030, we can power all of Australia's homes and businesses with 100% renewable electricity<sup>1</sup>
- By 2035, we can meet around 40% of our transport needs with renewable energy as well
- By 2050 we can cut all climate pollution from the whole energy system. Everything we do, from driving a car to hauling freight, from manufacturing to heating to taking a flight, can run on clean, affordable energy generated from the wind, sun, and other clean energy sources
- We can move to a 100% renewable power supply, and phase out all coal-fired power by 2030, with electricity that is more reliable than it is today.

<sup>1</sup> Excludes additional electricity demand from increased electrification of the transport sector.

## The numbers add up:

- Getting pollution out of our entire energy system by 2050 means Australia gets a \$800 billion slice of the global renewables investment, and all the jobs that come with it
- Investing more in clean energy means spending less on burning coal and gas
- Between 2017 and 2050, moving to clean energy and increasing energy efficiency will result in fuel cost savings that cover 110% of the cost of this shift. Our investment in fuel-free electricity would start paying itself off in lower prices as early as 2025, and by 2040 at the latest. Australia would save, on average:
  - \$9 billion a year on power sector fuel costs
  - \$11 billion a year on transport fuel costs.
- The combination of renewables and energy efficiency will deliver massive reductions in carbon pollution. Total energy-related carbon dioxide emissions will decrease from 450 million tonnes in 2015 to 196 million tonnes in 2030, and from 19 tonnes per person today to seven tonnes per person in 2030.

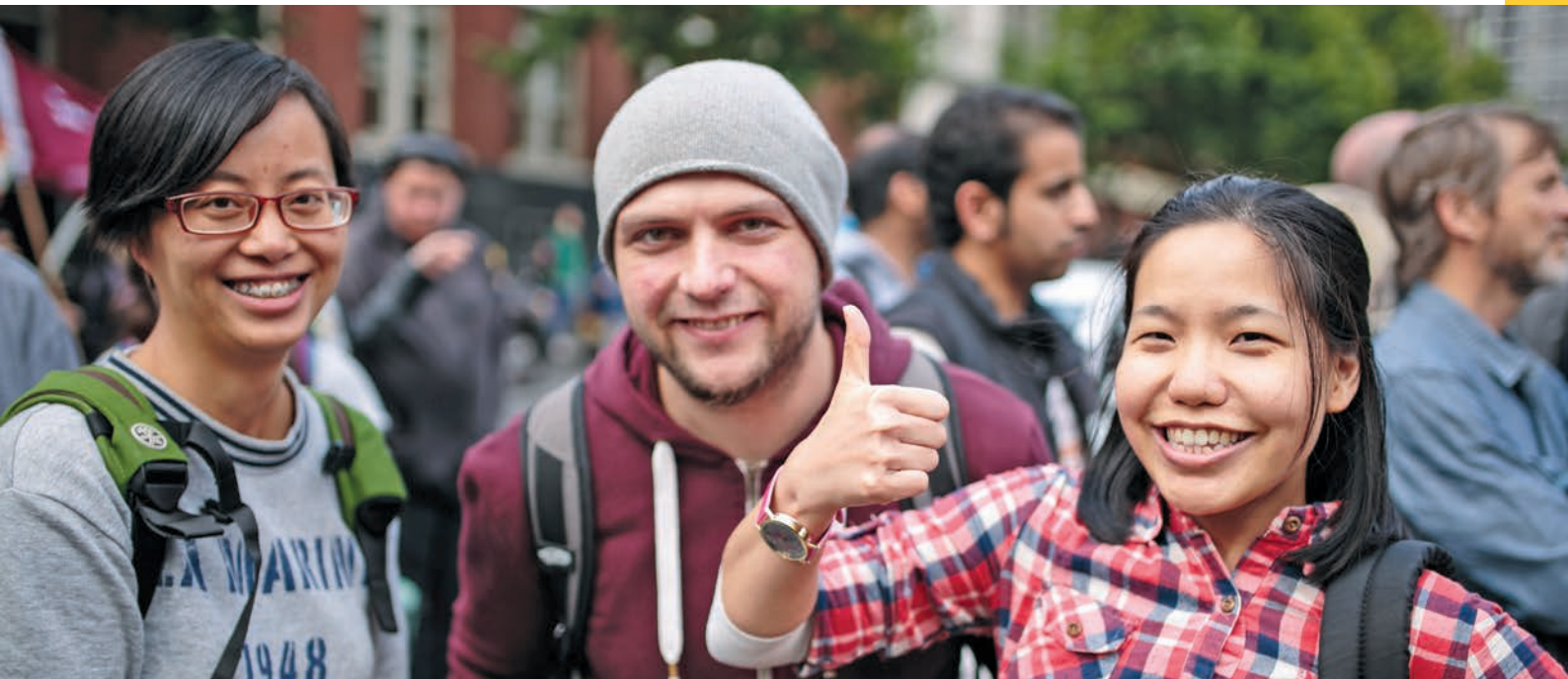


Photo: James Thomas

# PART 1: REWRITE THE RULES FOR PEOPLE NOT PROFIT

**Our National Electricity Market (NEM) is a mess. It combines the worst aspects of various approaches in the one system. Controlled by a few powerful energy companies, it is neither clean nor cheap, neither simple nor sophisticated. Nor is it public and fair or private and competitive.**

It's a system so rigged that over the past decade energy companies have spent over \$75 billion dollars 'gold plating' network infrastructure to the point where it now costs even more to sell electricity than to generate it. And you pay for it via your electricity bill.

## A NEM PURPOSE BUILT FOR THE CLEAN ENERGY FUTURE

**To transition to 100% clean energy we need to redesign Australia's antiquated electricity system. Here's how we do it:**

### 1 Put 100% clean energy in the National Electricity Objective

**The National Electricity Objective (NEO)** is the one sentence that rules them all – it dictates how the electricity market works. Our current NEO was explicitly designed to exclude the environment or social justice. This means decision-makers are overlooking the innovative renewable projects we urgently need. Change the objective, and everyone with the power to change the system will start working towards an affordable clean energy future, instead of fighting against it.

### 2 Power Access: Create a public interest retailer for people who need it most

**We've been told time and time again**, deregulation means more competition and lower prices for energy users. But when it comes to the NEM, three big energy companies now control the market and are increasing our energy bills. This is unfair and unnecessary. To help fix this mess we need the federal government, in partnership with states, to establish 'Power Access': a public-interest retailer that would provide clean energy services like energy efficiency upgrades and solar PV to help reduce low-income households' energy bills.

### 3 Make the electricity network act more like the internet

**Right now, people are completely beholden** to a clunky, centralised electricity system and the handful of companies that dominate it. By shifting the electricity network business model from analog to digital, millions of us could trade clean energy locally, instead of a few big centralised generators selling us their polluting power from far away. Imagine a website that lets you easily buy your electricity from your neighbour, or get it from the nearby solar garden that you part-own, or the wind turbine at your friend's farm at the edge of town. Think eBay, but for local energy.

TURNING THE ELECTRICITY MARKET UPSIDE DOWN IS NECESSARY, BUT IT WILL TAKE TIME. THERE ARE A FEW THINGS WE CAN DO RIGHT NOW TO KICKSTART THE TRANSITION.



Reward network companies for saving their customers money instead of wasting it



Give citizens a real seat at the table on the decisions that affect us



Create a fair feed-in tariff



Ensure equal access to the grid

*"Renewable energies are a start on the pathway to self-determination and out of poverty."*

Fred Hooper,  
Murriwarri Nation



# PART 2: REPOWER WITH CLEAN ENERGY

The past five years has seen a revolution in the economics of clean energy. Building new wind and solar capacity is now cheaper than building coal and gas, and households can generate electricity on their own rooftops for less than what retailers charge. Some people are starting to use energy more efficiently – but there's still much more we can do.

The transition to clean, renewable energy is inevitable. What's not inevitable is a transition that takes place fast enough to stop damage to our planet, or one that shares the benefit of wind, solar and storage with all Australians. That is, unless we all work together to take our power back – literally.

## RAMP UP CLEAN ENERGY AND ENERGY EFFICIENCY

### 1 Get smarter about Australia's energy use

**We need a government commitment** to double Australia's energy productivity by 2030, with policies and actions to make it happen. Doubling energy productivity means we use energy much more wisely and we get more output from every bit of energy that we use. Stringent vehicle emissions standards could give us the cleanest and most efficient cars in the world. Better building codes could bring energy independence within reach of more households and businesses. Stronger appliance standards would protect people from inefficient products.

### 2 Go big on wind and solar

**To make sure we have enough wind and solar** in the system to lower climate pollution, we need a policy in place that signals to investors and the energy industry to build, build, build! Whether it's a Clean Energy Target, an extended Renewable Energy Target (RET) or an Emissions Intensity Scheme, this policy must drive a rapid reduction in carbon pollution, consistent with Australia's Paris commitment to ensuring warming does not exceed 1.5-2 degrees over pre-industrial levels. It must speed up the replacement of dirty coal power with clean energy. Offsets slow down action and should not be allowed as a replacement.

### 3 Build the right renewables in the right places with reverse auctions & public ownership

**Policies like the RET** deliver lots of low-cost wind and solar power. To put us on the path to a stable, affordable, 100% renewable system, we also need complementary technologies, including storage, in the right locations. Federal and state governments should hold regular clean energy auctions for on-demand clean energy such as battery storage and concentrated solar thermal with storage. Or they could put these technologies in public hands, operating them for the public good.

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*Storage is able to respond faster than traditional power generators in an emergency, which means it helps with power stability in peak demand situations. It is a decentralised and distributed technology, which builds resilience and redundancy in the National Electricity Market (right down to a household level in the case of residential batteries with blackout protection).*

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Emily Driscoll, Off-Grid Energy





# CLEAN ENERGY FOR ALL

All Australians, no matter what they earn or where they live, deserve access to affordable clean energy. But some parts of our community still face barriers. This needs to change and with these people-powered programs, it can.

## 1 Smart Energy Communities Program

**Already, well over five million people** live under solar roofs and community energy groups are springing up across the country. A well-resourced grassroots organisation would speed up this people-powered energy revolution. Think Landcare for clean energy. The Smart Energy Communities program would support 'solar gardens' for renters, bioenergy hubs for farmers, and energy efficiency improvements and solar for low-income households. It should be funded by governments to kick-start community clean energy projects in towns and suburbs across Australia.

## 2 Clean Power Program designed with remote Indigenous communities

**Those on the frontlines of climate change**, who want to care for country, should be first in line to benefit from renewable energy. We should establish a collaboratively-designed, well-funded Remote Indigenous Communities' Clean Power Program. This would ensure that all remote Aboriginal and Torres Strait Island communities have access to clean, affordable, local renewable electricity.

## 3 Minimum energy performance standards for rental properties

**Australia's houses are like leaky tents** – cold in winter, hot in summer. Efficiency standards are trying to change this, but they are only in place in Australia for new buildings, leaving a huge gap in the rules for older rental properties. However, about half of low-income households live in rental properties, and low-income households are twice as likely to be renting as those in the highest income quintile. As a consequence, rental homes often lack basic efficiency measures that are nearly universal for owner-occupied properties. Landlords must be required to provide basic levels of energy efficiency for rental properties, which will immediately reduce energy burdens for low- and middle-income Australians.

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*Our house gets to 35 degrees inside in summer and as low as 10 degrees in winter. I'm worried about climate change, so I don't want to run the heater all day if I know all that energy is just blowing straight through the roof.*”

Margaret, renter



# MAKE AUSTRALIA A RENEWABLE SUPERPOWER

As the sunburnt country, we have the opportunity to be a power for good in the age of renewable energy, embedding low-cost clean electricity into every household and business and exporting our success to the world. Becoming a renewable superpower would create new industries, new investment and new secure jobs with a future. But this will not happen without a proactive approach.

## 1 Clean Energy Solutions Centre: Solar and wind powering our industry

**Every year, business and industry** uses around 70% of Australia's electricity. Supporting large energy-users to repower with clean energy is good for the planet and good business. Already, businesses from Whyalla Steel to Telstra are cleaning up their act with wind and solar, but others need a helping hand. The Clean Energy Solutions Centre would work with Australia's largest energy users to identify, finance and install the right efficiency and clean energy options. This would save money, cut pollution and supply sun-powered products to the rest of the world.

## 2 Export liquid sunshine to the world

**Using excess renewable electricity** to create renewable hydrogen enables Australia to bottle our solar and wind power and export it to the world. Australia needs a coordinated plan in the form of a Renewable Export Roadmap, as well as funding for demonstration and commercialisation projects, that will turn this huge opportunity into a sun-powered reality.


## 3 Get serious about good, renewable jobs

**We can boost homegrown jobs and industry** if we encourage local manufacture of components and use of local tradespeople. To do this we need to hunt the jobs out, with a Parliamentary Inquiry into the renewable supply chain. Then we need policy incentives to make the potential jobs a reality, particularly in regional Australia where the jobs are needed most.

**There's no silver bullet to transition to clean, renewable energy. Here are a number of policies that we need to make 100% renewables a reality for Australia:**

- Restore federal funding to the Australian Renewable Energy Agency and maintain federal support for the Clean Energy Finance Corporation
- Ensure everyone can access solar, including renters and apartment dwellers
- Accelerate the roll out of batteries
- Set up an electric vehicle charging network for a renewable-powered superhighway around the country
- Ensure the Australian workforce has the skills our renewable future needs
- Support our neighbours in Asia and the Pacific to access clean, affordable energy solutions – through our renewable exports





*"The construction and operation of these [new solar thermal] plants bring real jobs to real families, making real electricity, clean electricity, for decades. That is the vision we want to share for our country, and for our region."*

Gary, Port Augusta



# PART 3: REPLACE THE POLLUTERS

It might seem obvious, but given the power of big polluting companies over Australian politics, we need to spell it out: **burning coal and gas has no place in a clean energy future.** To fully unleash clean energy, we need to get polluting fuels out of the system. We also need to undo the legacies of years of industry lobbying, like our wasteful fossil fuel subsidies.

## HERE'S HOW TO DO IT:

### 1 Start coal power clean up ASAP

**Australia's fleet of coal-fired power stations** is among the oldest and least efficient in the world. Everyone knows they will have to be shut down sooner or later – the only question is when. Federal and state governments should set policies to enable the accelerated closure and rehabilitation of the most polluting coal-fired generators. This could be through Coal Clean-Up Auctions, or realistic age limits based on a carbon budget for the Australian electricity sector.

### 2 Ensure a just transition for coal communities

**Snap closures of coal-fired power plants** in Port Augusta and Latrobe Valley show why the foundations of a post-coal future must be laid early if workers and communities are to thrive through the transition. Federal and state governments should immediately start to develop community-driven economic renewal plans in areas facing closures. They should work with unions, employers and community groups to retrain workers, fully fund early retirement, and create redeployment options.

### 3 Implement toxic pollution controls with teeth

**Evidence is clear that air pollution** is a significant health risk. Each year, more than 3,000 people die from urban air pollution in Australia. Federal and state governments should make coal and gas companies responsible for their own mess. Governments should set binding pollution standards in line with international best practice, commit to better monitoring, and create load-based licensing schemes. The federal government should establish a new national Environment Protection Authority (EPA).

### 4 Support households, business and the power sector to quit gas for good

#### It's time to quit gas.

Unconventional gas pollutes our air, water and farmland. Meanwhile, a handful of price-gouging gas companies are driving up the cost of energy for the rest of us. Federal and state governments should work with industry to promote renewable heat alternatives to gas through targeted loans and dedicated renewable industry precincts. They should support households through a Cash for Gas Guzzlers scheme and ban gas infrastructure in new residential developments.

### 5 Shift money from polluters to problem-solvers by ending fossil fuel subsidies

#### In their persistent search

for budget savings, Australian governments keep pushing aside the billion-dollar savings they could make by winding back fossil fuel subsidies. If we stop letting big polluters free-ride on the rest of us, we could free up at least \$6.4 billion a year in revenue that could be put to much better use. This should start with the diesel fuel rebate: by capping it at \$20,000 per claim, we could deliver a federal budget saving of \$15 billion over the next four years. This would incentivise big mining companies to save energy and invest in cleaner alternatives, while ensuring that the rebate is still available to most farmers.

*"Knowing that with the big increase in gas prices as well as Australia's increased usage of fracking for gas supply, removing myself completely from gas grid was a great way to make my small mark on addressing climate change and moving to something smarter, more sustainable and affordable."*

**Jay, homeowner, Adelaide**



# LET'S REPOWER AUSTRALIA

We can't keep powering our lives with climate-wrecking fuels from the last century. Climate change is here, now, and we know how to fix it. It's time to repower Australia with clean, renewable energy from the sun, wind and waves. Let's ensure our future energy system puts people and the planet first – not a handful of big polluters.

**A**s we repower Australia, we are creating cleaner air and healthier communities. We are protecting ourselves and our planet from extreme weather caused by global warming. We are driving lower energy bills and better jobs with a future, that are good for our future. Most importantly, we'll have a liveable planet.



*This is not a matter of 'we should do this', or 'we'd be wise to.'*  
*It's simpler. We must. And we can. So let's get on with it.*















**AUSTRALIAN  
CONSERVATION  
FOUNDATION**



**SolarCitizens**

community power  
agency



**Nature  
Conservation  
Council**

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The Repower Australia Plan was written by Nicky Ison,  
Miriam Lyons and John Atkinson. To download the full  
report, head to: [www.acf.org/repower\\_plan](http://www.acf.org/repower_plan)

