

THE HOMEGROWN POWER PLAN

How we can repower the country with renewable energy, reboot our failing electricity system and remove the roadblocks holding back the renewables boom.

GetUp!



SolarCitizens

A person wearing a red hooded jacket and dark pants stands on a mound of earth, with their arms raised in a gesture of triumph or hope. The background features a grassy hillside under a bright blue sky with scattered white clouds. Several large white wind turbines are visible on the horizon. A solid yellow vertical bar is on the left side of the image.

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

Australia is at a crossroads. We can unleash the power of the sun and wind to provide clean, safe, affordable and reliable energy for all. Or we can choose to keep burning fossil fuels that pollute our atmosphere and warm our planet, causing extreme weather and threatening our health, our economy, and the places we love, like the Great Barrier Reef. Continuing to burn fossil fuels is unaffordable, in every sense.



The Homegrown Power Plan, a joint project between GetUp! and Solar Citizens, shows how we can repower the country with renewable energy, reboot our failing electricity system and remove the roadblocks holding back the renewables boom. We must:



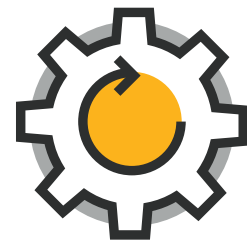
Reboot the system, rewiring our laws to deliver affordable, 100% renewable electricity.

- Stop old energy dinosaurs from squashing their cleaner competitors
- Reward people for contributing to the 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.



Repower the country, turbo-charging our existing renewable energy policies and adding some missing parts.

- Restore the certainty needed for investors to build big renewable energy projects
- Unleash the innovation we need to reclaim our place in the renewables race
- Enable a people-powered energy revolution, where no-one is locked out of the renewables boom



Remove the roadblocks, ensuring new renewables aren't held back by the legacy of a bygone era.

- Level the playing field for renewable investment
- Plan the gradual and orderly closure of coal-fired power with a just transition for workers and communities
- Improve energy efficiency, making the transition easier and cheaper for all of us

When our politicians dismiss a 100% renewable future as impossible, what they really mean is it's uncomfortable. Uncomfortable to stand up to the companies who fund their election campaigns and fill the halls of Parliament. Uncomfortable to champion a better future when appealing to fear of the unknown is so much easier. The Homegrown Power Plan punches through their flimsy excuses and reveals what's really possible.

A move to 100% renewable power is practical, achievable, economically sound and overwhelmingly popular.

Governments are being left behind by citizens voting with their feet (or their rooftops). It's time they caught up. It's time to harness Australia's bountiful clean energy resources to repower our country, create jobs, generate investment and ensure a safe, clean future for our children and grandchildren.

A move to 100% renewable power is practical, achievable, economically sound and overwhelmingly popular.

100% RENEWABLE ENERGY FOR AUSTRALIA

Decarbonising Australia's Energy Sector within one generation

A report by the Institute for Sustainable Futures, University of Technology, Sydney¹

GetUp! and Solar Citizens commissioned a team of researchers at the UTS Institute for Sustainable Futures to find out how fast Australia can clean up its energy system. Their conclusion? A transition to 100% renewable energy within one generation is both technically feasible and economically responsible.

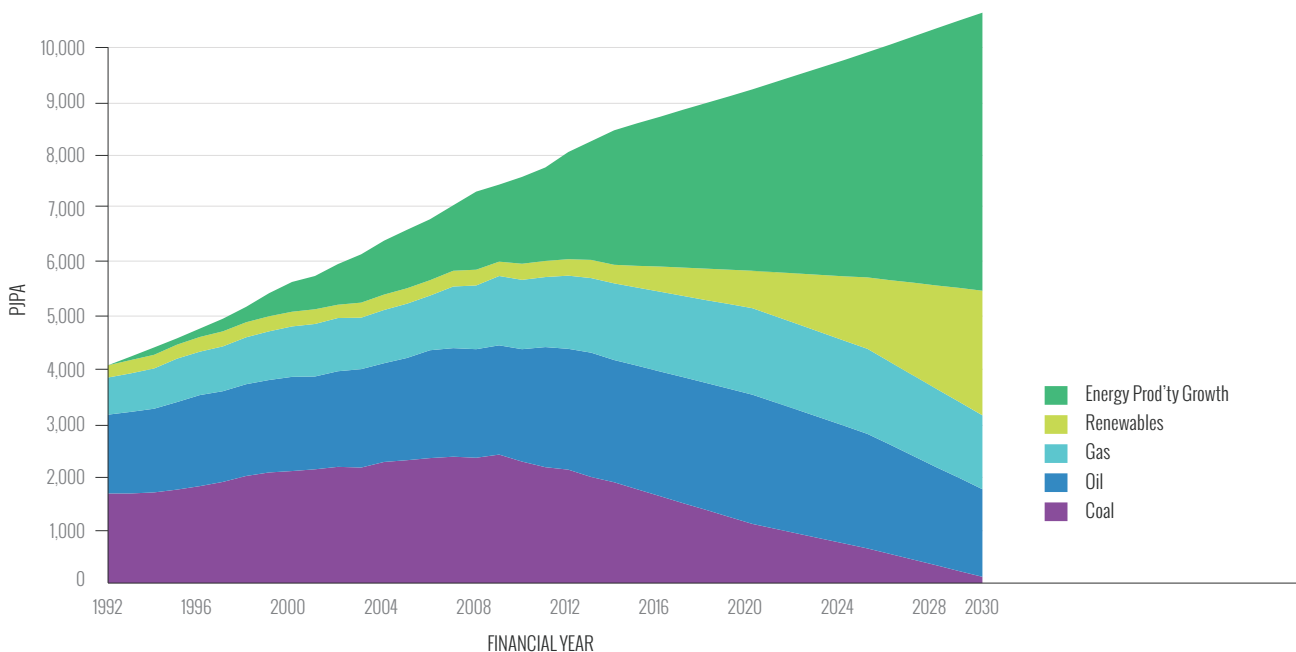
We can do this:

- By 2030, we can power all of Australia's homes and businesses with 100% renewable electricity.²
- By 2035, we can meet around 40% of our transport needs with renewable energy as well.

- By 2050 the whole energy system can be completely decarbonised. 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 renewable 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.
- The transition sees a smooth, stable expansion of renewables, well within what the industry says it can deliver, if the right policies are put in place now.

Australian Energy Consumption and Energy Productivity 1992 - 2014

and projection until 2030 under the 100% Renewable electricity scenario



¹ Teske, S. et al, (2016) '100% Renewable Energy For Australia: Decarbonising Australia's Energy Sector Within One Generation', Institute for Sustainable Futures, UTS. ² Excludes additional electricity demand from increased electrification of the transport sector.



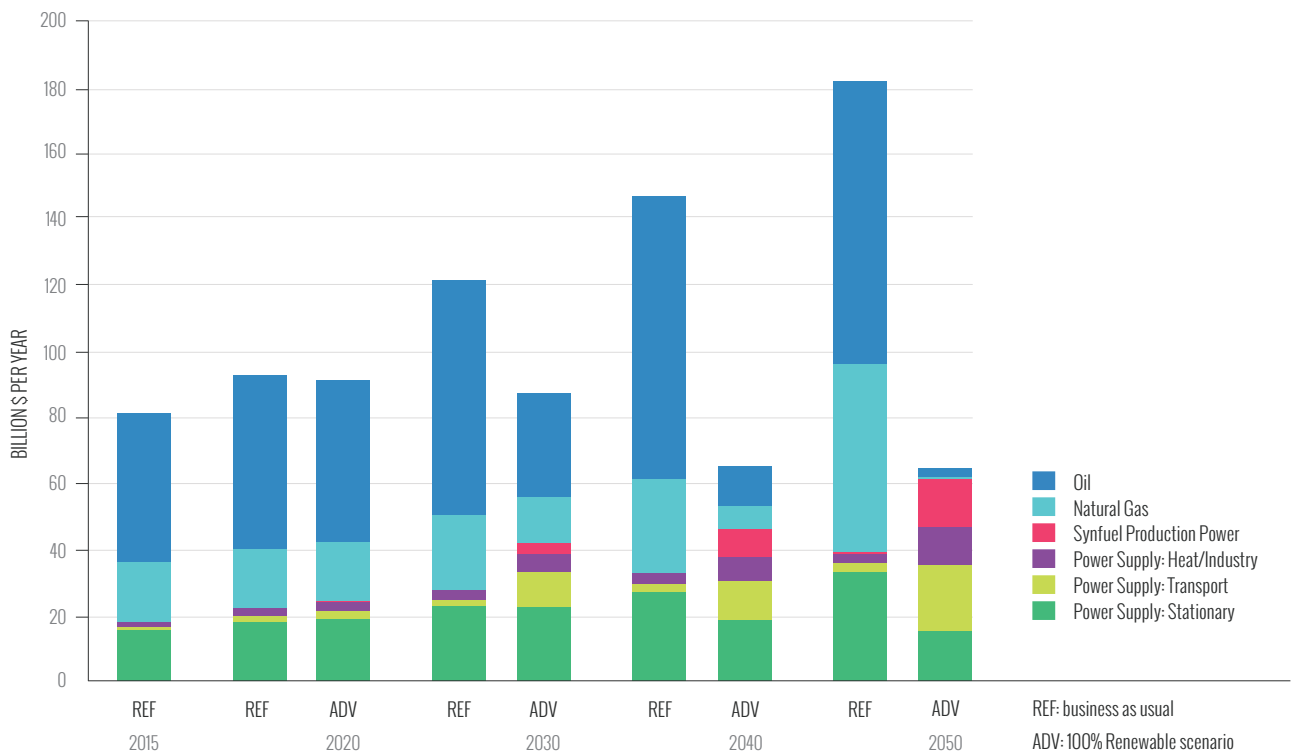
The numbers add up:

- Decarbonising our entire energy system by 2050 means Australia gets a \$800 billion slice of the global renewables investment boom, and all the jobs that come with it.
- Investing more in renewables means spending less on fuel. Between now and 2050, the shift to renewables and increased energy efficiency delivers enough fuel-

- cost savings to cover 110% of the bill for building 100% renewable power. Australia would save, on average:
 - » \$9 billion a year on power sector fuel costs
 - » \$11 billion a year on transport fuel costs
- On the path to a clean energy future, our investment in fuel-free electricity starts paying itself off in lower prices as early as 2025, and by 2040 at the latest. Bargain.

Electricity and Fuel Costs by Sector

Assumed low coal and gas prices in [billion \$ per year]



REBOOT THE SYSTEM

Our electricity market is a shambles. It combines the worst aspects of multiple regimes in the one system, a system that is neither clean nor cheap, neither simple nor sophisticated, neither public and fair nor private and competitive.

It's old, outdated and it's not getting better. Its institutions were designed for a centralised era, populated by passive consumers and powered by fossil fuels.

It's a system dominated by a few controlling power companies. It's a system so off it caused Australians, over the last decade, to spend \$75 billion dollars building far more electricity network infrastructure than we needed.

That's why the Homegrown Power Plan begins with a blueprint for transforming how our electricity system

is governed: without sorting out the rules of the game and how these rules are enforced, it is very hard for renewables to get on the field, let alone succeed.

The electricity market needs a reboot, not just reform. To transition to 100% renewable power we must completely redesign Australia's antiquated electricity system. Here's how.

1 Forge a cross-party commitment to a full energy transition

Taking the politics out of energy means we can get on with the job of switching over to clean, renewable power in an efficient and affordable way. We also need to make it someone's job, by setting up an Energy Transition Agency to coordinate the orderly phase-in of renewables and phase-out of fossil fuels.

2 Put 100% renewable energy in the one sentence that rules them all

Why we need it: The National Electricity Objective (NEO) dictates how the market works. **Our current NEO was explicitly designed not to include the environment or social justice**, which means the innovative renewable projects we urgently need are being overlooked. Time for an overhaul.

How it works: Federal and state governments rewrite the NEO so that it reads as follows: 'Deliver an affordable, efficient, reliable, safe and fair electricity system that is powered by 100% renewable energy.'

3 Make the electricity network act more like the internet

Why we need it: Right now consumers are completely beholden to a clunky, centralised system and the handful of companies that dominate them. By shifting the electricity network business model from analog to digital, millions of us could trade renewable energy locally, instead of a few big centralised generators selling us their polluting power from far away.

How it works: The Energy Transition Agency helps network companies to transform themselves into local energy trading platforms. Imagine a website that lets you 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:

Network fees make up half of the average household's bill. When you follow the money, it's easy to see why: **network companies earn more if they can spend more of their customers' money on poles and wires.** These companies should be required to set targets for cutting unnecessary spending by helping people use less energy at peak times. If they don't meet their targets, they should be penalised.

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

For every consumer group or concerned citizen trying to promote renewables or keep down prices, there is a swarm of highly paid industry lobbyists running over the top of us. The Federal Government must establish a level playing field for consumer, community and industry representatives to negotiate fair tariffs that reward households for saving energy.

Create a fair national feed-in tariff:

We need feed-in tariffs that reward people for contributing to the grid, not anti-solar fees and charges that punish them until they leave it. Local renewables are worth more than five cents a kilowatt hour, but their many benefits aren't reflected in the price solar households receive. The Federal Government must step in to create, or coordinate, a fair national feed-in tariff.

Ensure equal access to the grid:

It's too easy for network companies to abuse their market power and charge unfairly high fees when a new wind or solar project wants to connect to the grid. We should put the task of planning the grid in independent hands, set fair national standards for grid connection, and audit network companies to make sure they play by the rules.

Photo: Ray Pratt

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FOLLOW THE MONEY

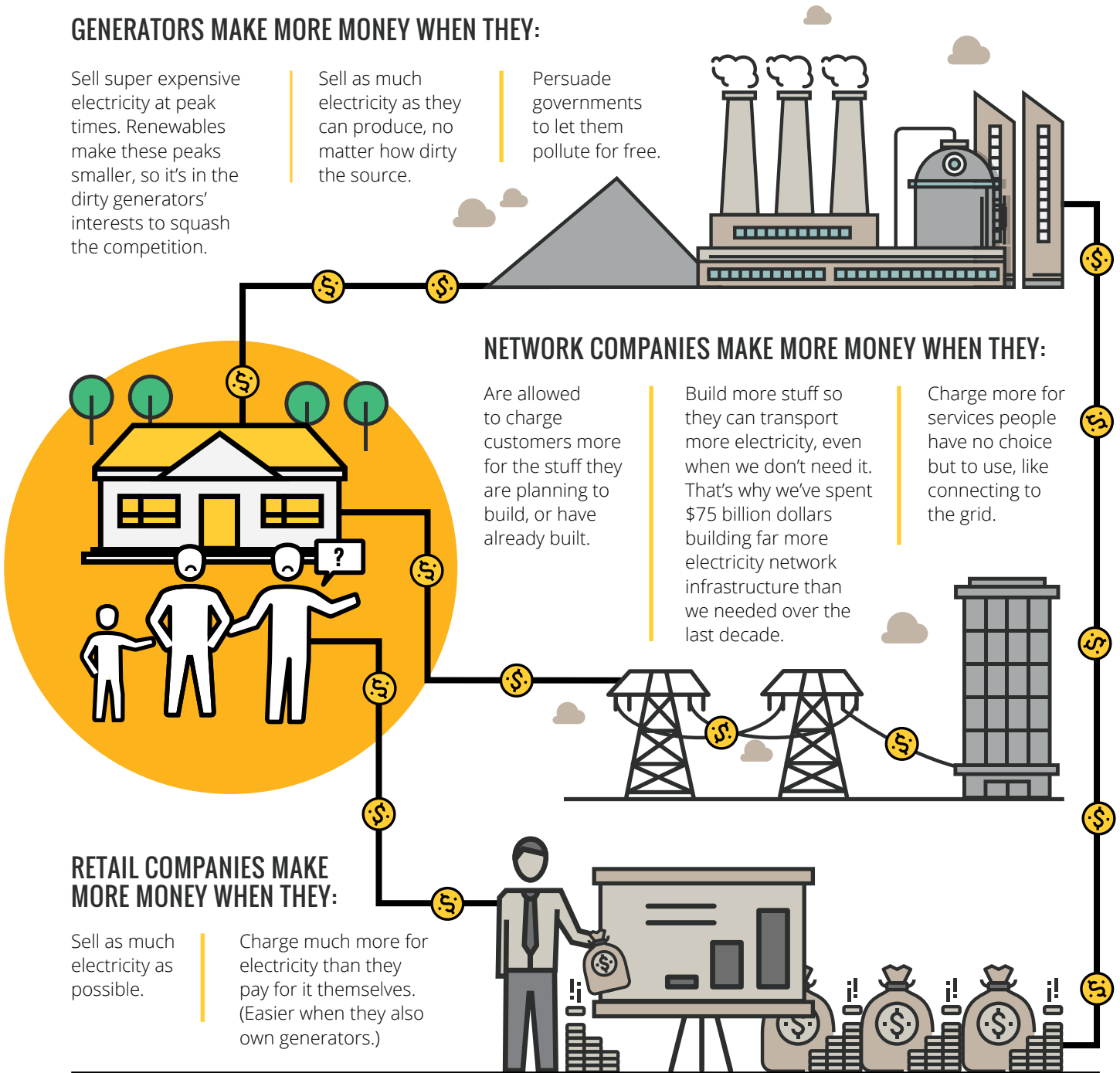
Big power companies are milking extraordinary profits at the expense of consumers. They do it because the system lets them. Here's how it works:

GENERATORS MAKE MORE MONEY WHEN THEY:

Sell super expensive electricity at peak times. Renewables make these peaks smaller, so it's in the dirty generators' interests to squash the competition.

Sell as much electricity as they can produce, no matter how dirty the source.

Persuade governments to let them pollute for free.



NETWORK COMPANIES MAKE MORE MONEY WHEN THEY:

Are allowed to charge customers more for the stuff they are planning to build, or have already built.

Build more stuff so they can transport more electricity, even when we don't need it. That's why we've spent \$75 billion dollars building far more electricity network infrastructure than we needed over the last decade.

Charge more for services people have no choice but to use, like connecting to the grid.

RETAIL COMPANIES MAKE MORE MONEY WHEN THEY:

Sell as much electricity as possible.

Charge much more for electricity than they pay for it themselves. (Easier when they also own generators.)

When you follow the money, you see how the system makes a few huge companies richer while the rest of us pay the price. It's wasteful, it's outdated and it's holding us back. Time for an overhaul.

REPOWER THE COUNTRY WITH RENEWABLE ENERGY

Australia is the sunniest continent on earth, and one of the windiest. In the race to repower the world with renewables, we've got an edge.

With the right policies in place, our renewable future looks bright. We'll see a lot of big renewable power plants in the places where the sun shines longest and the wind blows strongest, along with many smaller installations close to where people live and work.

The past five years has seen a revolution in the economics of renewable energy. Wind is now cheaper

than building coal and gas, and households can generate electricity on their own rooftops for less than what retailers charge.

The transition to renewables is inevitable. What's not inevitable is a transition that takes place fast enough to stop polluting the planet, or one that shares the benefit of renewables with all Australians. We need to:

UNLEASH THE RENEWABLES BOOM

1 Build the right renewables in the right places with reverse auctions

Why we need it: The existing Renewable Energy Target is a great way to deliver lots of low-cost wind and solar power. To put us on the path to a stable, affordable, 100% renewable system, we're also going to want some complementary technologies, including storage, in the right locations. Reverse auctions have a proven track-record: the ACT government's auctions have delivered some of the lowest renewable prices in Australia.

How it works: Holding regular national clean energy auctions, starting in 2017, would be a cost-effective way to get a head start on the essential elements of a stable, affordable, 100% renewable grid. The Federal Government should let the experts figure out what technologies are most needed where, and then run national reverse auctions to deliver the outcomes the grid needs at an affordable price.

2 Set an expanded 2030 Renewable Energy Target

Why we need it: Long-term renewable energy targets work. The existing 2020 RET is expected to cut electricity bills, unleash \$40.4 billion worth of investment and create 15,200 jobs. A majority of Australians want to see Australia transition to 100% renewables by 2030, and a 100% Renewable Energy Target is a reasonable, cost-effective and straightforward way to get there.

How it works: Leave the existing 2020 RET as it is and introduce an expanded target of 100% by 2030.

WALK THE TALK ON INNOVATION

Turbo-charge the Australian Renewable Energy Agency

Why we need it: ARENA plays an essential role in clean energy innovation, and Australia would be even further behind in the global renewables race if it did not exist. The Abbott Government tried to abolish ARENA, but it was saved by the Senate. Now the Turnbull Government wants to defund it and stop it from giving out grants. Without ARENA's grants, Australia misses out on everything from research funding for printable solar panels to the early-stage commercialisation of technologies like the Carnegie Wave energy pilot in Perth.

How it works: To ensure that ARENA can build on its strong track record of funding renewable energy innovation, all federal politicians must commit to increasing its 2016-2022 budget from \$1.3 billion to \$2 billion and giving it permission to make grants again.

FIVE MORE WAYS TO GET INNOVATIVE WITH CLEAN ENERGY:



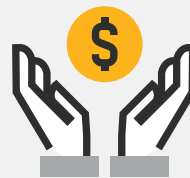
Give the Clean Energy Finance Corporation (CEFC) more choice about what it invests in, by lowering how much interest it has to charge on the loans it makes



Add a micro-finance division to the CEFC so that ordinary citizens and smaller projects can access its low-interest loans



Hold a Race to Renew, a clean energy business model innovation prize



Unlock equity crowdfunding in the clean energy sector, to allow thousands of people to invest in and benefit from local renewable projects



Create a clean energy service agency to help the Federal Government cut energy waste and switch to renewables

PEOPLE'S POWER-UP

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. But a new energy future is afoot, and it's powered by people.

1 Community Powerhouses

Why we need it: Already, well over 4 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.

How it works: The Community Powerhouses program would support 'solar gardens' for renters, farmer bioenergy hubs, community wind farms and low-income energy efficiency and solar. It should be funded by the Federal Government to help kick-start community clean energy projects in towns and suburbs across Australia.

2 A Clean Power Program designed by Indigenous communities

Why we need it: People on the frontlines of climate change and the fight against fossil fuel extraction should be first in line to benefit from renewable energy.

How it works: A collaboratively-designed, well-funded national Indigenous Communities Clean Power Program could ensure that all Aboriginal and Torres Strait Island communities have access to clean, affordable, local renewable electricity.

3 PowerAccess: a public-interest retailer for people who need it most

Why we need it: Rising electricity prices have hurt those who could least afford it. Many households were able to control their bills by buying more efficient appliances or installing solar, but this option is out of reach for many. What if there was a retailer designed to deliver clean, affordable power to those who need it most?

How it works: The Federal Government, in partnership with the states, sets up PowerAccess, a non-profit retailer specifically for low-income households. PowerAccess would supply electricity and energy efficiency upgrades, solar PV and more to low-income households across Australia.

REMOTE ABORIGINAL COMMUNITY SOLAR IN NSW³

With rising energy costs and an unpredictable power supply, three Aboriginal communities in remote northern NSW invited The Valley Centre and Pingala to work with them to overhaul their energy system and empower the community.

Electricity bills range from \$2,000 to \$5,000 for each household and in some cases can be higher. As Uncle Ike explains: "The price of our food is double what you get in the cities... And we are paying more for power than we are for any other cost. So how are you supposed to eat, how are

you supposed to live?" Now, these communities are working with AllGrid, an Indigenous-owned renewable energy company, to design a solar power and battery backup system for the 60 houses across the communities.

This model will allow these communities and others that follow in their footsteps to realise their vision and take control of their energy future. In the words of Uncle Ike "Anything you can own, gives you pride... and if you can own; your own power!"

³ Case Study written by April Crawford-Smith of Pingala and The Valley Centre.

REMOVING THE ROADBLOCKS TO A RENEWABLES TRANSITION

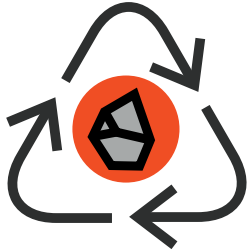
It might seem obvious, but given the disproportionate influence of big fossil fuel companies over Australian politics, we need to spell it out: fossil fuels have no place in a 100% renewable future.

To fully unleash the renewables boom, we need to get fossil fuels out of the market and into the history books. We also need to undo the legacy of years of industry lobbying, like our lax efficiency standards and wasteful fossil fuel subsidies.

Outmoded coal is holding us back

Australia's power sector is like an overgrown tree. We need to prune out the dead wood for the new shoots to grow. The Federal Government should give workers and industry certainty with a plan for phasing out all coal-burning power by 2030, starting with the orderly closure of the oldest and dirtiest coal-burning power plants in the next term of government. And it should ensure that the right measures are in place to guarantee that affected workers and communities get the help they deserve during the transition.

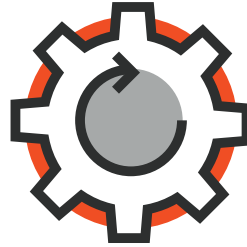
HERE'S HOW TO DO IT:



1 Start the coal power clean up ASAP

Why it's needed: Australia's fleet of coal-burning power stations is among the oldest and least efficient in the world. Everyone knows that they will have to be shut down sooner or later: the only question is when.

How it works: The Federal Government should hold Coal Clean-Up auctions to enable the closure and full rehabilitation of the most polluting coal-burning generators to be funded by other polluting generators from the windfall gains they will receive when their competitors shut down.



2 Ensure a just transition for coal communities

Why it's needed: A carefully managed phase-out of coal-fired power will ensure that affected workers and communities get the help they deserve instead of being abandoned by the big power companies. Examples like the snap closures in Port Augusta show that the foundations of a post-coal future must be put in place today if workers are to thrive through the transition.

How it works: Federal and state governments should work with unions, employers, and community groups to ensure that retraining is offered well before a plant closes, that early retirement offers are fully funded, that redeployment options are available, and that community-driven economic renewal plans are in place ahead of time.



3 Implement a National Air Pollution Control Act with teeth

Why it's needed: More than 3,000 people die from urban air pollution in Australia every year. The Centre for Air Quality & Health Research and Evaluation includes people who live near industrial pollution sources, such as coal mines, coal-burning power stations and smelters, among those most at risk.

How it works: Federal and state governments should make fossil fuel companies and other polluters responsible for their own mess, through A National Air Pollution Control Act with real teeth. Tighter regulations would force the most polluting coal-burning power plants to close if they can't comply with the new standards.

REPOWERING PORT AUGUSTA

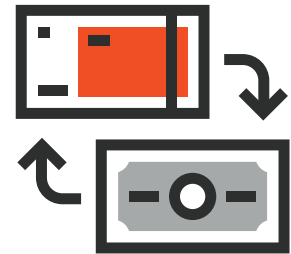
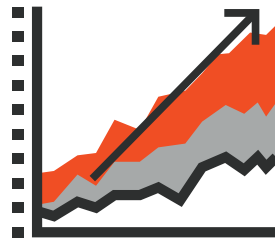
Suffering from disturbingly high rates of lung cancer and facing unemployment from the snap closure of its two coal-burning power stations, the community of Port Augusta wants its future to be solar powered.

For 5 years the community has been campaigning to replace the power stations with a concentrated solar thermal plant.

As current power station worker Gary Rowbottom puts it, "the world will transition away

from fossil fuels, that's not a hard concept to grasp. Therefore we need to replace it with something else".

It's estimated that a solar thermal plant would create at least 1000 jobs during the construction phase and 50 permanent jobs going forward. Exactly the kind of opportunity a community freeing itself from coal-burning power needs.



4 Double Australia’s energy productivity by 2030

Why it’s needed: The cleanest energy of all is the energy we never use. The bad news is that Australia is appallingly inefficient in the way we use energy, and getting to a 100% renewable future will be much harder than it needs to be if we go on wasting energy like we do today. The good news is that there’s no shortage of opportunities to save money and save energy at the same time.

How it works: Stringent vehicle emissions standards could give us the cleanest and most efficient cars in the world, tougher building codes could bring energy independence within reach of more households and businesses, stronger appliance standards could protect consumers from inefficient products and an Energy Efficiency Disclosure program could help heavy industry find the millions of dollars in energy savings hiding down the back of the couch.

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

Why it’s needed: In their persistent search for budget savings, Australian governments keep missing 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 much-needed revenue.

How it works: 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.

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THE HOMEGROWN POWER PLAN



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REBOOT THE SYSTEM, REWIRING OUR LAWS TO DELIVER AFFORDABLE, 100% RENEWABLE ELECTRICITY.

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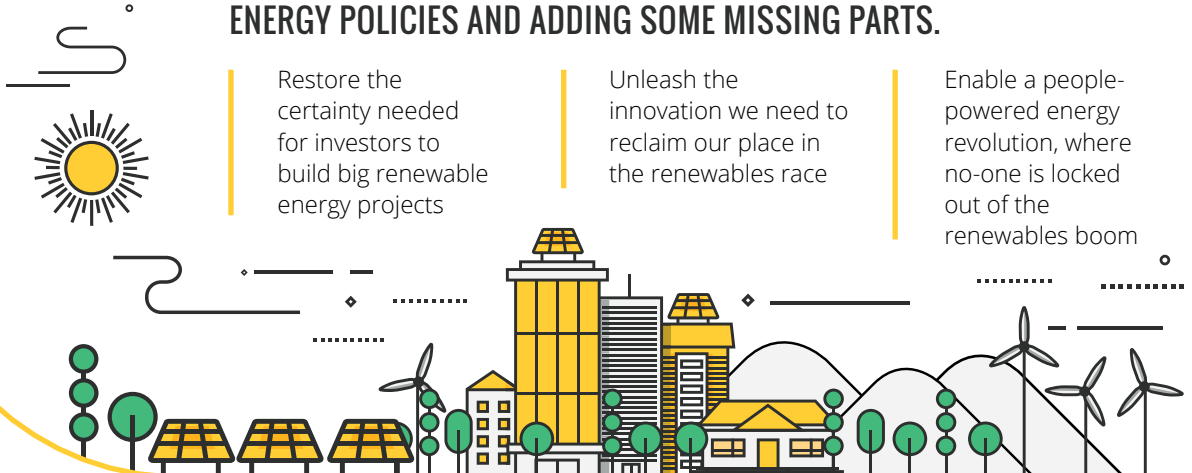


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The Homegrown Power Plan was written by Nicky Ison and Miriam Lyons. To download the full report, head to: <http://getup.org.au/hpp>



SolarCitizens

