

Putting jobs-rich climate solutions at the centre of Victoria's economic recovery from COVID-19

Stimulus and reform opportunities for the Victorian Government

July 2020



The COVID-19 pandemic has brought many challenges to governments around the world and Victoria is no exception. The Victorian Government has a complex task ahead to support communities, create jobs and boost the state economy while taking the actions necessary to protect public health.

The pandemic hit our state just as we were reeling from the Black Summer's unprecedented bushfires. With only 1.1°C of global warming, Victoria is experiencing more dangerous fires, heatwaves, storms and drought, putting families, workers, businesses and all Victorians at risk. Without urgent action around the world to reduce the carbon pollution overheating our planet, we are on track for temperatures and consequences beyond our ability to cope.

In light of this, leading voices - from the World Economic Forum, World Bank, International Monetary Fund and International Energy Agency to presidents, CEOs and mayors - have been calling for governments at all levels to seize the opportunity to scale up decarbonisation efforts while also boosting economic activity in response to the pandemic.

The Victorian Government should heed this call and place climate solutions at the centre of our plans for economic recovery from the pandemic. By doing so, we can create jobs for Victorians who need them most, whilst also cutting emissions and reducing the risk of future climate shocks in Victoria. Investment in stimulus and related reforms is more valuable if it also addresses other problems we face. We must use this opportunity to set ourselves up for the future.

In August 2020, the Victorian Government is due to announce a crucial decision: the level at which to reduce state greenhouse gas emissions for the next decade. To contribute to keeping Victorians safe from climate impacts, and reducing the risk of future climate shocks to Victoria’s economy, state emissions must be reduced in line with keeping global warming to below 1.5°C.

This submission points to a range of compelling opportunities to ensure the Victorian Government’s pandemic response delivers immediate economic benefits while also meeting the goals outlined in its *Climate Change Act 2017*, creating more resilient Victorian communities and supply chains, and ensuring Victorian workers and industries are set up to thrive in a zero carbon global economy.

The opportunities listed here draw on the findings of our individual organisations as well as leading researchers, think tanks and experts. Across a range of sectors, we identify measures for immediate stimulus impact as well as longer-term reform opportunities. Implemented together they will enable the Andrews government to make Victoria a leader in both economic recovery and climate action.

Signed by

Australian Conservation Foundation
Australian Wind Alliance
Beyond Zero Emissions
Climate Council
Environment Victoria
Friends of the Earth Melbourne
WWF Australia

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1. Clean, efficient housing for all

Australian homes are built to notoriously poor standards, with existing Victorian homes averaging just 1.8 stars. Our homes have been described as little better than glorified tents¹ – dangerously hot in summer and freezing cold in winter. Not only does the poor energy performance of our homes cause health issues, residential energy consumption also contributes approximately 19% of the state’s greenhouse gas emissions.

At the same time, energy bills are a key expense for households, particularly for low income households and vulnerable Victorians in public housing. On-site renewable energy, energy efficiency upgrades and switching from gas to efficient electric appliances are important options for reducing energy bills and potentially freeing up household income to be spent in more productive parts of the economy.

Economic stimulus in response to the pandemic presents a huge opportunity to finally kick-start a large scale improvement in the energy performance of our homes, creating thousands of jobs across the state in the process.

Immediate stimulus opportunities

1. **Make energy performance upgrades a key feature of the government’s \$500 million social housing upgrade package.** This will expand the capacity of the energy efficiency industry, especially the trades and businesses specialising in building shell upgrades (insulation and draught-proofing).
2. **Accelerate the upgrade of inefficient home appliances and fuel-switching from gas to efficient electric appliances** (especially reverse-cycle air conditioners and heat pumps for hot water) for people living in social housing, low income owner-occupiers, and landlords with the lowest performing rental properties. This will stimulate jobs in community services, retail, local manufacturing and supply chains.
3. **Rapidly expand the capacity of the Victorian Residential Efficiency Scorecard (VRES),** including training and hiring of new accredited assessors, in preparation for a widespread rollout of free energy audits across the private housing market.
4. **Invest in energy efficiency skills and training programs to build the capacity of the industry in preparation for a larger energy retrofit program.** Couple this with a rigorous auditing and compliance regime, to ensure that accreditation programs are providing technicians with appropriate technical and safety training.

Priority reforms

1. **Expand the Solar Homes program to integrate energy performance upgrades,** enabling this popular scheme to capitalise on the benefits of reducing energy demand via efficiency measures. This can also potentially reduce the cost to the government by reducing the size of PV systems required to power people’s homes.

¹ A Barnett, The Conversation, 2015, [Cold weather is a bigger killer than extreme heat - here’s why](#)

2. **Mandate disclosure of energy efficiency ratings for new and existing homes when they are advertised for sale**, helping to create a pull-through effect that will grow investment and job creation in the sector over the medium term.
3. **Implement minimum energy efficiency standards for rental properties**, based on a basic list of efficiency features phased in over time.²

2. An efficient, electrified Victorian manufacturing industry

Australian industry is among the most energy inefficient in the world and businesses are currently paying much more for energy than they need to. There is huge potential to improve the efficiency of Victorian manufacturing processes, boosting jobs and the competitiveness of local industry while ensuring Victoria will have resilient local supply chains into the future.

Reliance on gas - with high and volatile prices - has put enormous pressure on manufacturers in recent years. The Victorian government should heed the call of leading union and industry voices who recognise that renewable energy technologies will drive the future of manufacturing in our country.³

There is an urgent need to accelerate the uptake of clean electric technology and renewable energy across the manufacturing sector and move away from inefficient and expensive gas systems and appliances in commercial and industrial premises. When paired with on-site renewable energy generation, electrification of commercial and industrial gas usage will see long term reduction in energy prices and reduced exposure to the unstable gas market.

Immediate stimulus opportunities

1. **Introduce a grant or loan program to provide capital upgrades to Victorian manufacturers to improve energy productivity and accelerate fuel-switching.** For example, industrial heat pumps, refrigeration upgrades, solar and battery storage, waste avoidance and recovery to reduce energy costs associated with waste.
2. **Fund program leaders and outreach officers to ensure capital upgrade support and investment is strategically deployed,** targeting Victoria's most critical manufacturers for the supply chains of the future.

Priority reforms

1. **Set a target for replacement of Victoria's entire bus fleet with electric buses and invest in industry development to scale-up local manufacturing,** building on the success of the government's trial which resulted in the first electric bus manufactured by Volgren, in partnership with BYD, at their Dandenong plant.⁴

² Environment Victoria, 2017, [Bringing rental homes up to scratch](#)

³ A Morton, The Guardian, 2020, [Gas 'completely dominated' discussion about Covid-19 recovery, commission adviser says](#)

⁴ WWF Australia, 2020, [Delivering economic stimulus through renewables](#), p. 30

2. **Supercharge and bring forward the Victorian rolling stock strategy to support more trains and trams on Victoria's public transport network and local manufacturing jobs in regional Victoria.**
3. **Develop education and assistance pathways for industry to understand and implement efficiency and electrification measures,** including expanding existing Victorian TAFE programs that enable industry skill building for energy efficiency and electrical heating technology.
4. **Facilitate the creation of new Power Purchase Agreements (PPAs) for manufacturing hotspots to ensure these are not stalled by uncertainty created by COVID-19.** The state could intervene to negotiate PPAs with renewable energy project developers and on-sell the power to high energy users.
5. **Set up battery reprocessing and recycling plants in Victoria,** in line with WWF Australia's detailed national set of policies to ensure Australia becomes a leading global battery manufacturer.⁵
6. **Facilitate deployment of new models to take up the opportunity for renewable hydrogen to support traditional manufacturing processes** and to accelerate the greening of the steel and aluminium industries.⁶
7. **Facilitate the modernisation and repowering of the Alcoa Portland Aluminium Smelter,** to enable it to be more flexible and thus play a greater role in demand response to support grid stability.

3. Building Victoria's renewable-ready grid

Ensuring the National Electricity Market (NEM) electricity grid infrastructure and processes are modernised to support a clean, reliable electricity system based on increasing input from variable and distributed renewable energy sources is already a pressing priority. Accelerating these solutions can bring forward much needed job-creating economic activity.

The Clean Energy Council has pointed to 50,000 clean energy jobs ready to be realised in Australia through accelerating the deployment of renewable energy and transmission projects, with the construction of transmission and the unlocking of new opportunities for renewable energy generation particularly beneficial for rural and regional economies.⁷ But this is a fragile opportunity. A failure to successfully foster the industry could see 11,000 jobs lost instead.⁸

Governments must work together to push for the strategic direction and regulatory reforms needed to expedite transmission and interconnection planning and development for the NEM.

⁵ WWF Australia, 2020, [Delivering economic stimulus through renewables](#), p. 13-23

⁶ Clean Energy Council, 2020, [A Clean Recovery: Using Australia's enormous renewable energy potential to create jobs and jumpstart the economy](#), p.17

⁷ *Ibid.* p.12

⁸ University of Technology Sydney, Institute of Sustainable Futures, [Renewable Energy Jobs in Australia](#)

The variability of supply from the increasing use of renewables will need to be matched with storage in order to see energy needs met around the clock, highlighting an important role for development of solutions such as batteries and microgrids.

Immediate stimulus opportunities

1. **Extend and expand the battery rebate component of Solar Homes from 10,000 households to around 40,000 like the South Australian government scheme** to increase the uptake of household and community-scale batteries. Work with retailers to facilitate Virtual Power Plants (VPP), which increase the utility of rooftop solar systems in meeting energy demand and stabilising the grid.
2. **Expand the renewable microgrid demonstration program with a focus on regional and especially bushfire-affected areas**, enabling regional employment and future resilience to extreme weather events.
3. **Issue additional tenders for large scale storage**, noting the estimate from Reputex that approximately 600 MW of utility scale storage will be needed to prepare the grid for a potential early retirement at Yallourn.⁹

Priority reforms

1. **Drive agreements that will underwrite and expedite the major grid upgrades Victoria needs for a reliable and low-cost renewable-powered grid, including use of new powers under the National Electricity (Victoria) Act where necessary.** Major grid infrastructure projects such as VNI West and/or Marinus link should be confirmed and where possible, fast-tracked, to unlock substantial jobs and economic activity. These must be undertaken with strong community engagement and benefit-sharing initiatives to maximise benefits for regional communities.
2. **Call for National Electricity Market (NEM) regulatory bodies to take a ‘stimulus’ approach to crucial reforms and rule changes**, including accelerating the post-2025 market design project to allow consumer benefits to flow earlier¹⁰ and accelerating grid upgrade approvals by setting time limits for approval processes for new transmission infrastructure.
3. **Work with AEMO to ensure Victorian renewable energy grid connection processes are managed in a timely and transparent manner.**
4. **Ask AEMO to model a faster transition to 100% renewable energy, higher rates of electrification and more ambitious energy efficiency in their next Integrated System Plan** to enable planning to maximise the opportunities to decarbonise all sectors.
5. **Seek novel ways to stabilise the electricity grid by facilitating the deployment of smart devices** to allow for remote adjustment of loads on the electricity grid and ensure benefits in price and resilience over time by allowing large loads to be timeshifted or reduced to match supply.

⁹ Reputex Energy, 2019, [Victorian market readiness to support the early retirement of Yallourn power station, commissioned by Environment Victoria](#)

¹⁰ The Australia Institute, 2020, [Energy Reform after Covid-19: Stimulus for clean energy reform](#)

4. Turbo-charging Victorian renewable energy generation, supply chains and jobs

Around Australia renewable energy investment is in danger of slowing down due to dropping wholesale electricity prices and supply chain constraints caused by the pandemic. With the end of the federal Renewable Energy Target, state government schemes like the Victorian Renewable Energy Target (VRET) and power purchase agreements (PPAs) are now the main drivers of new capacity.

The VRET has already been identified as a major driver of not only Victoria's clean energy transition but also of jobs and economic activity. Victorian Government figures suggest that the 50% by 2030 goal is expected to drive \$5.8 billion in economic activity and create 24,000 jobs. This should be fast-tracked so that proven benefits associated with the development of new large scale wind and solar projects can be realised as soon as possible.

Fast tracking renewable energy development would have the additional benefit of preparing Victoria for the near-term retirement of the state's pollution-intensive and increasingly unreliable coal power stations, particularly Yallourn which is the oldest and least viable. In 2019 Reputex found that a combination of an additional 2.6 GW of large-scale, 0.3 GW small scale renewable energy and measures to increase storage and demand-side participation, Victoria will have all the available resources necessary to compensate for the absence of Yallourn within just three years.¹¹

The Victorian Government's successful and popular Solar Homes program is rolling out rooftop solar on residential homes but there are many more opportunities to create solar jobs and bill savings where they're needed most including by installing solar on public housing, state and council owned facilities, and incentivising an acceleration of solar on commercial rooftops.

Immediate stimulus opportunities

1. **Announce and deliver a series of new reverse auctions, adding up to 1,000 MW over the next 18 months, under the Victorian Renewable Energy Target (VRET) to speed up the deployment of large-scale wind and solar projects in targeted areas where there are no immediate grid constraints.** The scheme should be designed to maximise local employment, training and manufacturing opportunities. It should be announced before October 2020 with the first auction taking place in the first quarter of 2021.
2. **Provide solar on Victorian public housing.** Equipping one third of the existing public housing stock with an average system size of 5kW would create 670 jobs in the solar industry and mean an additional 130MW of clean energy in Victoria.¹²
3. **Implement a scheme to ensure businesses implement energy efficiency and renewable energy upgrades where payback periods are less than 3-5 years,** either by making this a government regulation (similar to the successful Environment and Resource Efficiency Plans program), incentivising through changes to the Victorian Energy Upgrades program, or supporting it through a Clean Energy Finance Corporation-style, revolving funds model.

¹¹ Reputex Energy, 2019, [Victorian market readiness to support the early retirement of Yallourn power station, commissioned by Environment Victoria](#)

¹² Solar Citizens, [Rooftop Recovery: Economy wide benefits of rooftop solar](#)

Priority reforms

1. **Bring forward the VRET to achieve 50% renewable energy by 2025 and set a new target for 100% by 2030.** Analysis by Reputex has found that Victoria is already effectively on track to achieve 50% renewables by 2025.¹³ Leaving the current target in place puts at risk the jobs in Victoria's renewable energy industry (including supply chain jobs) if there is no intention to ensure more projects go ahead. A much higher target for 2030 would put Victoria on par with jurisdictions like South Australia, which is already aiming for 100% renewables by the end of the decade.¹⁴
2. **Commit to supporting the development of offshore wind, such as the Star of the South project,** ensuring maximum manufacturing and employment opportunities for the Latrobe Valley region and working with the federal government to develop a legislative framework to support the offshore wind energy industry.
3. **Increase uptake of 'solar gardens' by facilitating their deployment on state- and council-owned facilities and land,** including fire-stations, libraries, sports clubs and community halls, helping to bring the benefits of rooftop solar to those who might not otherwise be able to access it.

5. Boosting nature restoration, sustainable agriculture & bushfire recovery

The health of our land and natural environment underpins Victoria's prosperity. This is particularly the case for our food and fibre production and export industry. Almost across the board, however, indicators of environmental condition show trends of continued decline. From an environmental and biodiversity perspective, there is an urgent need for scaled-up nature restoration efforts.

Revegetation also provides valuable climate benefits: over the past 20 years, land use and forestry in Victoria has shifted from being a net source of emissions to being a net sink - that is, absorbing more greenhouse gases than it produces. This is, and must remain, an important part of our state's efforts to reduce our emissions.

Conservation and land management activities have a high labour to capital cost ratio – that is, inputs other than labour are comparatively low, meaning more of the money spent is going directly to those doing the work. Many practical conservation activities are fast-start and require minimal training. This means the benefits can be passed to communities and workers immediately, with most work being entirely compatible with physical distancing guidelines and accessible as a form of short-term employment for those in other industries or sectors who have lost their jobs or who are temporarily unable to work due to lockdown restrictions.

Meanwhile, the pandemic has taken attention away from the still very recent tragedy of this past summer's devastating bushfires. The recovery plight of those communities must be remembered, and

¹³ Reputex Energy, 2019, [Victorian market readiness to support the early retirement of Yallourn power station, commissioned by Environment Victoria](#)

¹⁴ RenewEconomy, [South Australia Minister aiming for 100 percent renewables before 2030](#)

local habitat restoration and economic activity opportunities are desperately needed.

Finally, agricultural production is a major source of emissions - primarily methane from livestock and cropland fertilisation. Helping our farmers become more resilient to a drying climate should be combined with helping our farmers to reduce emissions from their farming practices.

Immediate stimulus opportunities

- 1. Rapid investment in clean-up and rebuilding work in bushfire-affected areas**, including removing remaining debris and replacing homes, buildings, farm infrastructure and roads. Much of this work has slowed due to a focus on the pandemic.
- 2. An employment program to boost rates of revegetation and restoration of landscapes across Victoria**, connecting land managers (including Catchment Management Authorities and local councils¹⁵) with people looking for work, while seeing drawdown of greenhouse gases, improved biodiversity and resilience of those living on the land.¹⁶
- 3. Habitat restoration programs in fire-affected areas, including reforestation and replanting, managing pest plants and animals during the immediate re-growth phase, and surveying the recovery of species**, creating opportunities to those who have lost work in the timber industry, either through direct impact of the fires or due to contraction of the industry.

Priority reforms

- 1. Create a farming modernisation program that provides information, tools and advice to help farmers increase their productivity in a changing climate** and establish incentives for farmers to adopt best management practices with an emphasis on low- or no-cost abatement opportunities, including meeting growing market demand for sustainable or low-carbon food. This should include investment in regenerative agricultural practices to ensure that local environmental conditions are able to support food production in a warming world.
- 2. Commence a program of law reform to ensure Victoria's legislative framework for land management, biodiversity and conservation is fit-for-purpose** in a rapidly warming and drying world.
- 3. Fund a range of urban sustainability improvements**, including: greening measures to promote resilience to heatwaves (Australia's biggest natural killer, bringing dozens of co-benefits, across local employment, health and well-being and a number of other areas); support for urban agriculture and water-sensitive urban design.

6. Investing in sustainable, healthy transport

Climate solutions are urgently needed in Victoria's transport sector because it is the second largest

¹⁵ This can also be done in metropolitan councils, for example the City of Melbourne: [Greening the City - 150,000 new plants and trees](#)

¹⁶ Ernst & Young, 2020, [Delivering economic stimulus through the conservation and land management sector](#)

source of emissions in the state and, before the coronavirus, these emissions continued to grow steadily. Transport is also a sector where climate solutions can be jobs-rich: construction of public transport infrastructure, including large-scale, long-term projects such as Melbourne Metro 2 and the Suburban Rail Loop, can be an ongoing source of employment and productive economic activity over long periods.

There are also opportunities to roll out smaller, faster, more distributed upgrades of particular sections of our transport network. Many of these have been identified in Friends of the Earth's #GetOnBoard Community Powered Transport Plan.¹⁷

Pandemic lockdown restrictions have proven the potential for some workers to work remotely, helping to reduce the overall number of trips needed to maintain economic activity - a saving of both emissions and costs to households.

Programs to incentivise car-pooling can help reduce congestion and help individuals save on transport costs. Mode-shifting from car trips to active or public transport also helps to reduce congestion, providing broader economic benefits while also reducing emissions. One focal point should be on moving trips away from car usage, but the other needs to be ensuring that residual car trips are as clean as possible - meaning, encouraging a rapid shift to electric vehicles that can be powered by renewable energy.

Immediate stimulus opportunities

- 1. Invest in active transport infrastructure options to encourage more bike riding and walking,** including expanding footpaths and cycling lanes. This discourages car use, reduces footpath crowding, creates urban renewal and is highly jobs-intensive. Rebate schemes for e-bikes and e-scooters are also being used in other jurisdictions to encourage more active and less polluting forms of transport.
- 2. Run public transport services at high frequencies for more hours in the day,** and consider “pop up” dedicated bus lanes across metropolitan areas and a program of rigorous cleaning and visual guidance to support social distancing. This will help avoid a shift from public transport to cars as people return to work after coronavirus restrictions ease, and creates immediate jobs for more drivers and cleaners..
- 3. Accelerate incentives to drive the uptake of electric vehicles,** including rebates for EVs, investing in charging infrastructure, offering peripheral benefits to EVs (like reserved parking and use of high occupancy lanes on freeways), and committing to replacing government fleet vehicles with electric alternatives (including no new purchases of internal combustion engines).

Priority reforms

- 1. Realign transport infrastructure spending and priorities to support the state government's aim to reach net zero emissions by 2050.**
- 2. Electrify public transport and ensure that this is powered by 100% renewable energy.** In

¹⁷ Friends of the Earth, 2020, [#GetOnBoard Community Powered Transport Plan](#)

Victoria, this will also mean, in particular, the electrification of the bus fleet and diesel trains. This fleet should be constructed locally to ensure the maximum possible benefit to the state. As an extension of the Solar Trams initiative, state government power purchase agreements should be used to procure the renewable energy needed to run trains and buses, which also helps to ensure construction of additional wind and solar farms.

3. **Commence a program of improvements to Melbourne's tram, train and bus networks**, including investment in new/upgraded stations/stops, extended tram lines, and duplicate train tracks, with the aim of running metro trains every 10 minutes, buses every 20 minutes, 7:00am to 10:00pm, 7 days a week. Melbourne lags behind almost every other big city on this. This would reduce crowding and congestion, create jobs, encourage a move out of cars.
4. **Consider the potential introduction of congestion pricing** as a further incentive to shift to active/public transport options.

Further policy details

- **Australian Conservation Foundation**, May 2020, [*Recover, rebuild, renew: Let's make things right for people and our country*](#)
- **AMWU, CFMEU Construction, ETU, Gippsland Trades and Labour Council, MUA and Victorian Trades Hall Council**, November 2019, [*Putting the 'justice' in 'just transition': Tackling inequality in the new renewable economy*](#)
- **Beyond Zero Emissions**, June 2020, [*The Million Jobs Plan*](#)
- **Beyond Zero Emissions**, September 2018, [*Zero Carbon Industry Plan: Electrifying Industry*](#)
- **Clean Energy Council**, May 2020, [*A Clean Recovery: Using Australia's enormous renewable energy potential to create jobs and jumpstart the economy*](#)
- **Clean Energy Council & University of Technology Sydney, Institute for Sustainable Futures**, June 2020, [*Clean Energy at Work*](#)
- **Climate Council**, May 2020, [*Primed for Action: A Resilient Recovery for Australia*](#)
- **ClimateWorks Australia**, April 2020, [*Decarbonisation Futures: Solutions, actions and benchmarks for a net zero emissions Australia*](#)
- **Environment Victoria**, May 2020, [*Submission to the Building Victoria's Recovery taskforce*](#)
- **EY**, June 2020, [*Delivering economic stimulus through the conservation and land management sector*](#)
- **EY & WWF Australia**, June 2020 [*Australian renewable export COVID-19 recovery package*](#)
- **Friends of the Earth**, April 2020, [*Covid-19: Blueprint for Climate Justice: Climate stimulus package*](#)
- **Friends of the Earth**, July 2020, [*#GetOnBoard Community Powered Transport Plan*](#)
- **Solar Citizens**, June 2020, [*Rooftop Recovery: Economy wide benefits of rooftop solar*](#)
- **The Australia Institute**, May 2020, [*Energy Reform after Covid-19: Stimulus for clean energy reform*](#)
- **WWF Australia**, June 2020 [*Delivering economic stimulus through renewables*](#)