

TRANSITION FROM CRISIS

Victorian Trades Hall Council's Just Transition & Economic Recovery Strategy



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Acknowledgement of Country

Victorian Trades Hall Council acknowledges the Wurundjeri Woi Wurrung of the mighty Kulin nation as the traditional owners of the land on which we live, meet and work. This land was stolen and never ceded, always was and always will be Aboriginal land.

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About Victorian Trades Hall Council (VTHC)

VTHC is the peak body representing workers and unions across Victoria. We represent over 430,000 workers and 40 affiliated unions, covering all sectors of the economy, both public and private.

Worker Stories

FRANCIS TABI AND EVANA TIRO FARM WORKERS

Francis Tabi and Evana Tiro arrived in Victoria to work as seasonal workers in the hope of making some decent income to send home to their family in Vanuatu but the weather, climate change and then COVID-19 put a halt to their plans.

The couple arrived in late October last year just ahead of the grape harvest and went to Mildura ready to work and keen to support their family back at home.

Nine months later the couple haven't been able to leave as a result of the COVID-19 and they are now in Australia without secure income.

They arrived in Mildura to pick grapes during a drought and just ahead of one of Australia's worst bushfire seasons.

Francis and Evana say when they were working they had to work in extreme heat and didn't have enough water. They were sent home by their supervisor and not paid when there were dust storms, or if it rained.

"We had no idea what a dust storm was before coming to Australia. We don't get them at home and at home when it rains we still work - it's different here," says Evana.

The pair were still paying up to \$200 a week to their employer for accommodation and food. They quickly racked up a debt of well over \$1,000 after their hours were cut in December and January.

Seasonal workers like Francis and Evana live at the whim of the weather and the climate.

If something is wrong with the crop, workers bear all the risk.

This season was bad for grapes, it was too hot and the season came too late.

This means workers like Francis and Evana have had to sit around for weeks building up debt. When the grapes were ready to pick, they were harder to pick which meant they were paid less because they are paid per piece they pick (on piece rates).

Francis and Evana decided to do something about the poor conditions and lack of pay.

They joined the United Workers Union and went on strike because they weren't getting enough hours and therefore pay.

Typically the couple would only have been in

Australia for six months under the conditions of the seasonal workers programme, but when COVID-19 hit the country in full force they couldn't get flights home.

"I decided to come to Australia to earn money, but I found it was a challenge because we didn't earn enough and didn't get enough hours," says Evana.

A month after Australia was put into lockdown, Vanuatu faced another challenge - cyclone Harold.

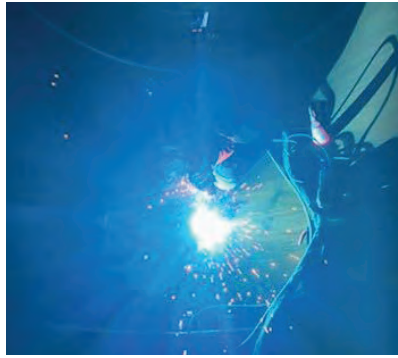
Francis and Evana watched from afar as their parents and two sons lived through the cyclone and had to try to repair their badly damaged home.

They were unable to send any money home because their hours had been cut.

UWU has been able to help them access their Climate Disaster Relief Fund - a fund specifically set up for disasters caused by climate change

Francis and Evana spoke at UWU's climate organising meeting and are now working on a farm in northern New South Wales.





JAMIE WOMBELL RENEWABLE ENERGY WORKER

Jamie Wombwell has worked as a mechanic and welder for 25 years. For the last five years, he's worked in the renewable energy industry for Keppel Prince Engineering who are at the centre of wind turbine production.

Jamie is a union delegate for the Australian Manufacturing Workers' Union (AMWU), which he says has been crucial in ensuring workers at Keppel Prince have secure jobs.

When he was offered work in the renewable energy industry, he says he never looked back.

"I look at the way the world is going with pollution, climate change and everything else. We have to do better. I want to leave the world as clean and as safe for my children, my grandchildren, and my great-grandchildren as I possibly can."

Jamie says his union has been crucial in the work to ensure renewable energy targets are pursued and met and that working people are prioritised in doing this.

Jamie lives with his partner and five children in the rural Victorian town of Portland, a town with just over 10,000 people.

Keppel Prince is the second largest employer in Portland, close behind Alcoa.

Job creation is crucial for rural communities and Jamie says the Victorian Government has been leading the way in Australia with a target of ensuring that by 2030, 50 per cent of energy production in the state is via renewable sources.

In October 2019, the government passed new legislation to boost Victoria's Renewable Energy Target (VRET) to 50 per cent by 2030, building on an original target of 25 per cent by 2020, and 40 per cent by 2025.

Jamie says the first target resulted in up to 80 workers being hired by Keppel Prince but COVID-19 has put the brakes on the roll out of investment and bids across the state to ensure the government reaches its' 2030 target.

Up until now, Keppel Prince have fabricated 80 of the 140 wind turbines on the Macarthur wind farm. They've also made and assembled wind tower components on-site.

Most of the materials, including 90 percent of the steel they use are manufactured in Australia.

"The first VRET put in place by the Victorian Government was fantastic, it has kept us busy for two-and-a-half years - we hired an extra 70 to 80 workers, just to keep up with the demand," says Jamie.

Workers like Jamie are calling for the government to bring new investment to renewable energy to meet the 2030 target so that Keppel Prince can continue to grow its output.

Employment is crucial to Portland and workers like him.

Achieving renewable energy targets will not only create jobs for regional Victorian workers, it will result in lower CO2 emissions and drive down energy prices.

Jamie says Keppel Prince is one of the top producers of wind turbines in the world and this would be a crucial strength when Victoria begins to recover from the global COVID-19 pandemic.

"Now is the time to boost manufacturing in Australia - if we can do this we can recover from COVID-19. Australia is known for the best quality manufacturing and top trades people."

Jamie says using local content requirements are crucial to support Australian manufacturing. He said in other states there were purpose built facilities available to be used for manufacturing windtowers, but they were only being used as storage because the relevant state governments did not have local content requirements and were instead importing turbines.

"Local content requirements create thousands of jobs.

"I am happy that my job has an impact on improving the environment and reversing climate change. I think everyone needs to be doing this."

Statement from the Secretary

When we started to prepare this strategy, Victoria was in the grip of a bushfire crisis of unprecedented scale. No sooner had the fires been extinguished than COVID-19 entered the margin of our consciousness, at first as an deadly virus causing problems in China. Since then, it has broken its geographic bonds and gripped the world in a pandemic and everything has changed. The measures implemented to deal with the crisis have been unprecedented but necessary, with a phenomenal reduction in economic activity to save lives.

On top of the bushfire and climate crisis came a public health threat that led to an economic downturn the likes of which we have never experienced. Even the Great Depression is of limited comparison, although many governments have learned at least one lesson since then (a lesson many didn't understand during the Global Financial Crisis): don't respond to such a crisis with austerity; spend quickly and spend big.

The most important lesson from the COVID-19 crisis is that it is only governments that have the scale, authority and financial capacity to respond to challenges of this size. The scale of the fiscal response to COVID-19 shows that, when a government takes a problem seriously and commits to dealing with it, the finances to get the problem fixed can be found and the spending is supported by the general population. The implications for action on climate change are obvious. The fact that governments have not acted at sufficient speed and scale to deal with the climate crisis is not a matter of lacking the resources – it is lacking political will.

The trauma, disruption and dislocation caused by COVID-19 are unprecedented outside of war time. The response, with its restrictions of civil liberties and suppression of economic activity, has been necessary, proportionate to the threat, and largely accepted by the population. The deep irony is that acting proportionately to deal with climate change would require none of those infringements of liberties and would produce an economic transformation that would leave Victorians better off.

Hence this strategy is not simply for a just transition but for an economic recovery and the reconstruction of Victoria. In the period of recovery, after COVID-19 has been brought under control, we must learn the lessons from the virus response, continue to mobilise the resources we need, build on the incredible growth in community spirit and mutual aid, and get to work to deal with climate change with a determination that is based on hope and necessary action for a better world. COVID-19 has shown us what we can achieve if we want to change, as it has shown how much of our previous world was, beneath the superficial gloss, deeply broken. We can't return to the old normal after COVID-19; we owe that much to ourselves and each other.



Luke Hilakari
Secretary
Victorian Trades Hall Council

Purpose of our strategy

Victorian workers and their unions are ready to take a leading role in ensuring the restructuring of the Australian economy to mitigate climate change is fair, by putting workers and communities at the forefront.

With workers and unions leading the transformation of the economy, we will not only help to avoid the worst effects of climate change, it will lead to a more just society in which workers have a much greater share of the wealth they create. This is a moment in time in which we can reduce inequality, increase control over our own working lives, and have our economy work in the interests of everyday people.

Without workers and unions playing this leading role, we risk either climate and economic breakdown or a transformation that is authoritarian, gives priority to the interests of capital over workers, and replicates the economic, social and political injustices that characterise the world today.

There are few more important issues facing workers in Victoria than how our economy is restructured and rebuilt in the wake of the COVID-19 crisis to reduce the risks of climate change and to manage the effects of the warming that is already locked in to the climate system.

Climate change affects all workers, but in different ways. Health professionals like nurses, and emergency services workers like fire fighters and paramedics, are on the frontlines of the response to extreme weather and disasters and at the same time managing the pressures of other crises, like COVID-19. Public sector workers must manage everything from fire reconstruction work to welfare support to coordinating pandemic responses, often after years of federal funding cuts. In drought-affected communities, local workers can be hurt by the economic

decline caused by lack of water, which has also led to closures of businesses such as dairy farming. Construction workers and farm workers must deal with the increasing number of hot days, often resulting in a downturn in industry productivity.

COVID-19 and its economic fallout have demonstrated that in times of crisis it is far too often women who disproportionately bear the brunt, both in job losses and also as frontline workers acting in response. It has also shown us that crises – whether climate or health related – exacerbate existing inequities, meaning those in insecure work, the low-paid, the disabled, migrant workers and First Nations communities are disproportionately affected. For instance, the link between insecure employment and the spread of the virus is now acknowledged by health authorities and the Victorian Government: workers without paid sick leave are more likely to go to work while sick. This tells us that in preparing for the challenges and likely crises of the future, including those climate-related, the elimination of these inequities and inequalities must be given high priority.

All of us will have to learn how to cope with a changing climate. But managing the economic restructuring that will be necessary to avoid the worst impacts of climate change will be particularly important for workers and unions. Workers and their unions know only too well what happens when individual firms or industries are restructured without workers or unions having a proper say: it's workers who pay the price.

The move to a sustainable economy also provides huge opportunities. Even before the COVID-19 crisis, Australia faced wage stagnation, an epidemic of insecure employment, persistent unemployment and growing under-employment, a burgeoning threat to jobs by technological change and industrial restructuring, record levels of inequality, and a rising tide of right-wing populism. The COVID-19 crisis has only exacerbated these problems, making it impossible to argue that the current system is serving the majority of workers and their communities well. It's time for a rebuild.

Both crises have also demonstrated the importance of public services and public servants. The financial robustness of governments, the public-spiritedness of their workforce, and their capacity for long-term public-interest planning are vital ingredients for dealing with crises of all kinds, and the climate crisis in particular.

If unions and workers insist on taking greater control over the way wealth is created and distributed, we can not only deal with the fallout from the COVID-19 economic crisis and the threat of climate change but we can also begin to create better, more secure and well-paid jobs, and ensure that the wealth we create goes to improve the lives of ordinary Victorians.

Some people may think that some of the proposals in this strategy are ambitious and can't be achieved.

Our response to this is twofold: First the climate crisis is unprecedented in human history. Action to deal with it must be commensurate with the risk that climate change poses. Second, because the risk is so substantial and the timeframe for action so short, we need all shoulders to the wheel and a wide array of policies and actions. Whatever we can achieve today we should achieve. By achieving some relatively easy things we might create the conditions for the achievement of other, harder, things later. History tells us that policies that appeared utopian when people started out became eminently reasonable once actions were taken and

the field of possibilities opened up.

This strategy document outlines the opportunities that are available if we act to reduce the threat of climate change, and the actions that Victorian unions will take to lead in the transformation of our economy to one in which workers and their communities are at the centre.

Explaining this document

This document has several purposes:

- Provide policy ideas to help the transition to a socially just and sustainable society;
- Put workers and their unions at the centre of the task of building a sustainable Victoria and Australia;
- Guide VTHC's work with unions and our actions on climate change;
- Support unions with their organising and campaigning on climate and just transitions;
- Engage with the climate and environment movement, first nations people and their organisations, and with governments, on the issue of just transition;
- Ensure that workers do not get left behind and are not worse off during and after a transition; and
- Stimulate thinking and action in the union movement about climate change and just transition.

VTHC hopes that unions will engage with the document by providing ongoing feedback on its contents, holding meetings to discuss it, publishing articles in their journals about it and helping to propagate it as broadly as possible. We hope that unions will be involved in the campaigns that might arise from it, or in the training and further policy development work that will follow from it. VTHC, needless to say, will provide support to unions in every way possible.

An ‘era of disasters’

Extracted from the Australian Council of Trade Unions Report ¹

“Since the pre-industrial period, human activities are estimated to have increased Earth’s global average temperature by about 1°C, a number that is currently increasing by 0.2°C per decade.”² Most of the current warming trend is the result of human activity already unsafe and leading to a significant increase in climate-related disasters such as drought, flooding, bushfires and the loss of coral reefs globally.

In 2016 the Paris Agreement came into force. The Agreement’s central aim is to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change.”³ The Agreement has been ratified by 187 nations, with Russia recently joining.

The premise of the Paris Agreement is that given decades of failure in trying to negotiate a scientifically credible enforceable agreement, a voluntary agreement allowed more ambitious emissions reductions pledges that could be periodically reviewed and escalated. Nevertheless, a recent court decision to reject the approval of a new runway at Heathrow Airport near London is based on the UK government’s ratification of the Paris Agreement and the responsibility this entails to take action commensurate with the Agreement. In other words, although the Agreement is voluntary, the court found that ratifying it imposes obligations on governments to make serious attempts to achieve the targets it sets.

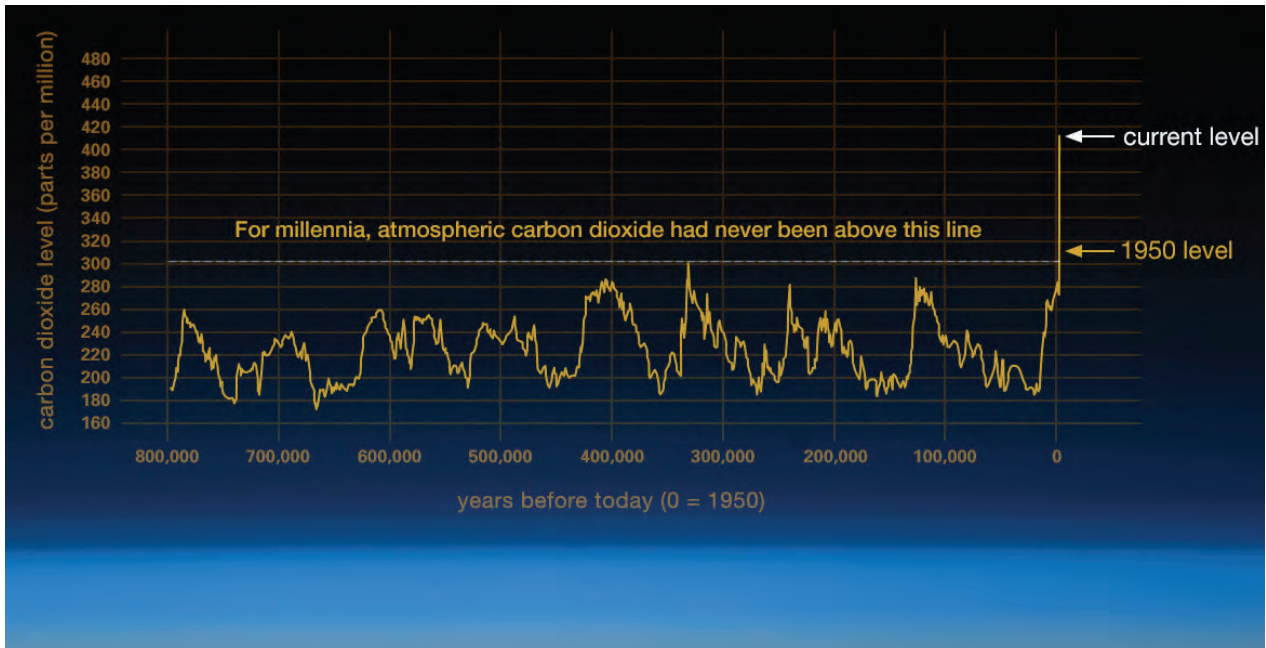
While the Paris Agreement has led many nations to increase the ambition of their emissions reductions, current pledges and actual policies of the nations that have ratified the agreement

fall well short of limiting warming to well below 2°C, let alone 1.5°C. Climate Action Tracker analysis finds that current policies internationally would lead to catastrophic warming of around 3°C by 2100.⁴

In 2018 the International Panel on Climate Change (IPCC) released a Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and pathways for mitigation. It found that:

- “Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues at the current rate”;
- “Climate-related risks for natural and human systems are higher for global warming of 1.5°C than at present, but lower than at 2°C. These risks depend on the magnitude and rate of warming, geographic location, levels of development and vulnerability, and on the choices and implementation of adaptation and mitigation options”;
- In model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO₂ emissions decline by about 45% from 2010 levels by 2030 reaching net zero around 2050; and
- Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems. These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options.”⁵

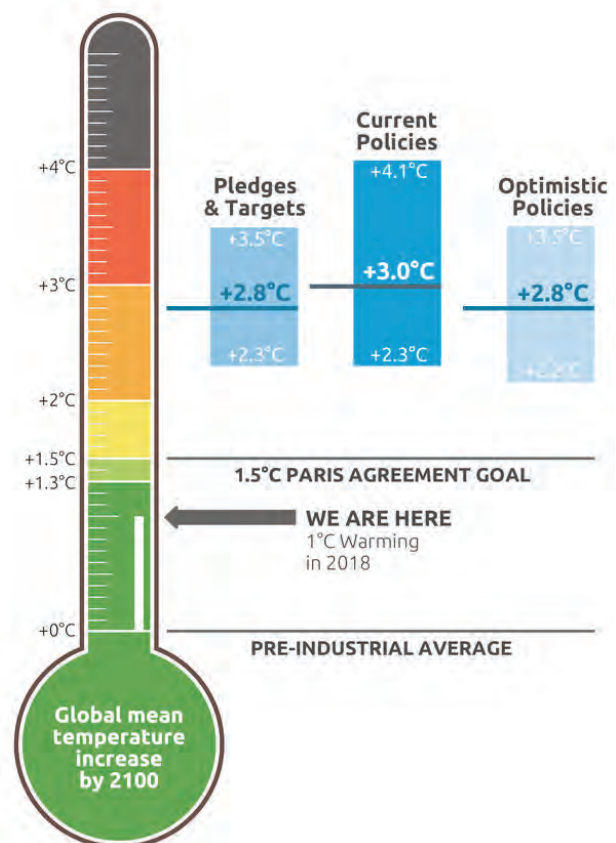
TRANSITION FROM CRISIS



Some progress was made at the New York U.N. Climate Summit in September 2019, where 65 countries made zero emissions commitments by 2050 (in addition to 12 nations that had already made this commitment). Many subnational governments and cities also made this commitment, along with 87 companies and 15 large investors.

Globally there is increasing momentum for zero emissions by 2050 targets to demonstrate progress towards limiting global warming to 1.5°C. It should be noted, however, that this zero emissions timeframe is a global timeframe, and that UN member nations are of the view that wealthier countries with higher historical pollution need to make a proportionately larger contribution by reaching zero emissions before 2050.

At the next Conference of the Parties (due in late-2020 but now postponed to 2021 because of the pandemic), countries are expected to submit updated emissions reduction targets for 2030 and long term zero emissions targets that are expected to be consistent with the Paris Agreement.



AUSTRALIAN TRENDS AND STATUS

Australia is particularly vulnerable to the impacts of climate change, being the driest inhabited continent on the planet.

The 1.14°C increase in average temperature since 1910 has contributed to more extreme droughts, mass bleaching of the Great Barrier Reef, more extreme bushfires and heatwaves, and a rise in the number of damaging floods and hailstorms. All of these are wreaking significant economic damage. For instance, the current drought has seen Australia's agricultural production drop by \$6 billion since 2017.⁶

Australia has persistently been a drag on international action on climate change, apart from during the brief period the nation had a price on carbon, when emissions fell significantly.

In August 2015 the Abbott Government submitted to the UNFCCC its intended Nationally Determined Contribution, with an economy-wide target to reduce greenhouse gas emissions by 26 to 28 per cent below 2005 levels by 2030. Additionally, the Australian Government committed to translating the 2030 target into "an emissions budget covering the period 2021-2030".⁷ This is yet to happen.

Emissions continue to rise under the Morrison Government and Australia is highly unlikely to meet its already inadequate 2030 emissions reduction target.

Emissions are rising in the transport, fugitive emissions and stationary energy sectors, but have recently been falling in the electricity sector largely as a result of state and national renewable energy targets and the retirement of ageing coal-fired power stations. It is important to note that the federal renewable energy target will soon cease to drive new renewable energy investment as it will be fully subscribed. There is no other substantial federal policy mechanism to encourage investment in new power generation and there is no Federal Government plan to manage the transition currently underway

in the electricity sector or other sectors.

The Morrison Government claims that it is on track to meet its Paris target but the Australian Government's own projections show that Australia is not on track to reach our national emissions reduction target of 26-28% by 2030 (below 2005 levels). According to the government's projections, in order to meet our current emissions target, Australia will need policies to reduce emissions by an extra 695-762 million tonnes (Mt) of greenhouse gas pollution between 2021-2030.⁸ The Morrison Government argues that almost half of this target can be met by using 'carryover credits' of 328 Mt from the Kyoto Protocol period. This is an approach that only Australia and Brazil are considering.

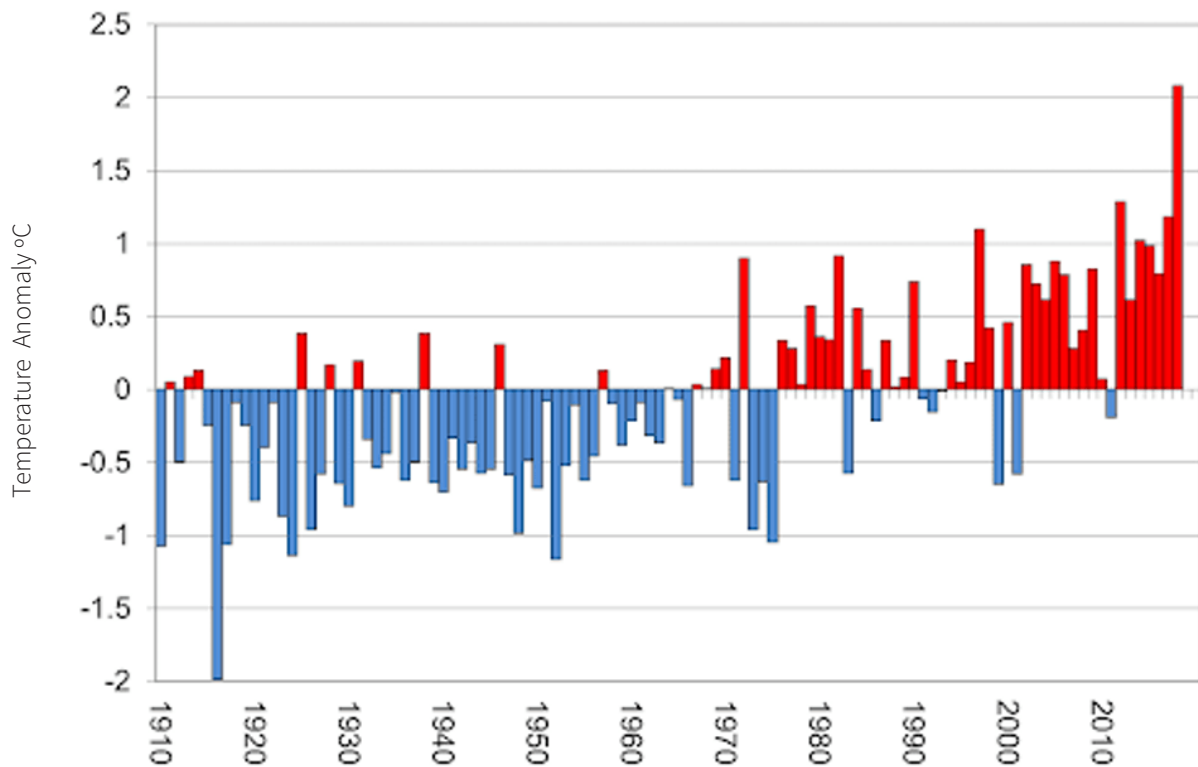
The Australian Strategic Policy Institute has warned that as the world warms 2°C beyond pre-industrial levels, we'll enter an 'Era of Disasters'⁹ with profound implications for how we organise ourselves to protect Australian lives, property, economic interests and our way of life. ASPI warns that:

As the frequency of extreme events increases, we'll likely see an increase in concurrent extreme events and in events that follow in closer succession. Communities may weather the first few but, in their weakened state, be overwhelmed by those following. Large parts of the country that are currently marginally viable for agriculture are increasingly likely to be in chronic crisis from the compounding impacts of the steady rise of temperature, drought and bushfires. The scale of those impacts will be unprecedented, and the patterns that the hazards take will change in ways that are difficult to predict.

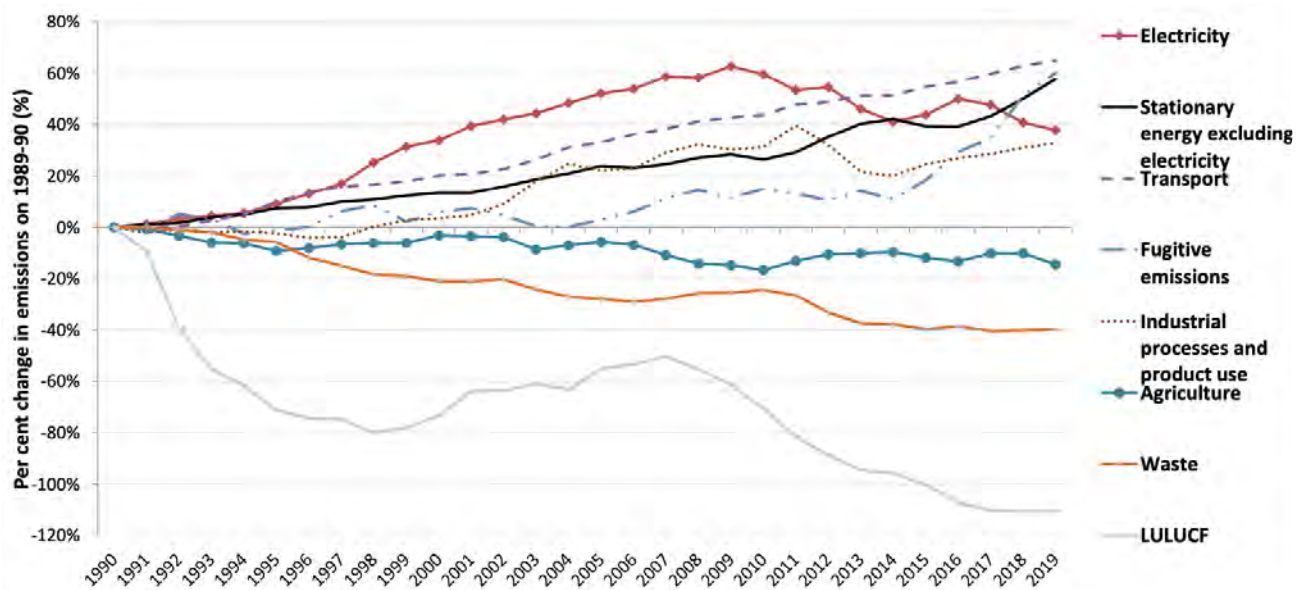
This emerging 'Era of Disasters' will increasingly stretch emergency services, expose workers to dangerous conditions, undermine community resilience and escalate economic costs and losses of life.

TRANSITION FROM CRISIS

Australian Summer Mean Temperature



Percentage change in emissions, by sector, since year to March 1990



Source: Department of the Environment and Energy

The principles underlying our strategy

The fundamental principle underlying this strategy is that because dealing with climate change involves large-scale economic restructuring, workers must be placed at the centre of the process. Technological change is important – how we generate electricity, for instance – but no more so than questions of who owns the technology, whose interests are served by delaying action on climate change, and whose interests will be most harmed by a poorly managed transition.



The climate crisis is not a natural phenomenon. It wasn't caused by working people but has been created by the way our societies have been politically and economically structured. A well-managed transition will be in the interests of workers and could lead to a better world than the one we are likely to face after the pandemic crisis.

Working people must be given and must take real power to change the system that is causing the climate crisis, and to ensure that their interests are paramount. Workers and their unions must be given a leading role in what will be the biggest restructuring of the Australian economy in history.

The principles for our strategy emphasise the centrality of workers' interests and the scientific facts related to the climate:

1. Directly affected workers and communities must be at the heart of all planning, decision-making and action;
2. Workers and their communities from carbon intensive sectors should be better off. This includes workers and communities that already find themselves detrimentally impacted due to closures in carbon intensive industries;
3. Australia's economy should have an emissions profile consistent with the goal of keeping global temperature increase to 1.5°C, which all scientific bodies and agencies agree will help to minimise the damage caused by climate change, and which the Australian Government has committed to through the Paris Agreement process;
4. Action must be commensurate with the risks we face, namely that the current high risk requires a comprehensive response;
5. Management of the transition cannot be left to the market. It requires detailed planning and investment, including public ownership, and intervention by all levels of government;
6. Government decisions and planning should maximise the opportunities presented by the transition to a sustainable economy;
7. Transition processes should be inclusive and aim to reduce social and economic marginalisation, including of First Nations and migrant communities;
8. New energy forms must have a social licence to operate, including and specifically from Traditional Owners. This includes any changes to land use, the ownership models of energy generation and genuine job creation for First Nations communities;
9. The costs and benefits of the transformation should be widely and fairly shared and Victoria's welfare, broadly defined, should be improved by the transformation;
10. Transition strategies should contribute to the eradication of gender inequality by improving women's socio-economic status, security and wellbeing, and facilitating the full participation of women in all sectors of the workforce; and
11. Victoria's environment, natural and urban, should be improved by the transformation.

A further set of principles is designed to take account of the need for economic recovery in the wake of the COVID-19 crisis. Once the virus has passed and the recovery phase of the crisis commences, government spending will be vital. However, spending should not be used to recreate the economic system as it existed before the crisis. Government fiscal action can be used in a transformative way and should be guided by the following criteria. It should:

- Support job creation and employment in sustainable industries; specifically, provide good

quality, safe and secure unionised jobs;

- Target socially, economically and environmentally useful activities that help the Victorian economy in the long term;
- Ensure that the most vulnerable workers and communities are given priority access to those jobs, and
- Encourage the democratisation and de-monopolisation of the Victorian and Australian economy.

Just transition efforts by unions nationally and globally



Large numbers of unions, union peak bodies, climate and climate justice organisations, NGOs, financial organisations, as well as governments and international bodies, particularly those under the UN umbrella, have released reports with a focus on the just transition.

A brief selection includes:

- The ACTU Congress passed a substantial climate, energy and just transition policy in 2018.¹⁰
- The MUA, AMWU, ETU and VTHC produced a report advocating for the development of an offshore wind industry, with the Star of the South project in Gippsland as the initial project; and providing numerous recommendations for just transition measures.¹¹
- New Zealand's E tū (Stand tall) Union produced a Just Transition policy¹² which has guided the union's engagement in the Taranaki 2050 Roadmap to a Low-emissions Economy.¹³
- The ILO has produced a number of reports setting out the opportunities that a well-managed transition could create, providing key principles and policy suggestions.¹⁴ The ILO has also placed considerable emphasis on the need for skills development for the



- green economy¹⁵ and provided a policy brief on the challenges of achieving the goals of the Paris Agreement.¹⁶ Additionally, the ILO's Green Jobs Programme provides substantial resources about the transition to green jobs.¹⁷
- The International Trade Union Confederation (ITUC) has a Just Transitions Centre, which promotes workers' rights in the transition to a sustainable economy; and produces numerous yearly reports on union actions in relation to just transition around the world.¹⁸
 - Several global union federations have devoted considerable effort to organising and campaigning around the climate crisis. Public Services International (PSI) is one of the most active, providing resources on a dedicated web page.¹⁹ PSI has also explicitly sought to connect the COVID-19 crisis with the need for better jobs and a green recovery, for instance in their statement, 'For a just, green, feminist COVID-19 response and recovery'.²⁰
 - The Toronto and York Region Labor Council in Canada provides an example

of a similar kind of organisation to VTHC and has a substantial suite of policies on climate change.²¹

- Trade Unions for Energy Democracy (TUED), a global union alliance of which VTHC is an affiliate, focuses on advocating for public and social ownership of renewable energy, and energy democracy more broadly.²² It has produced numerous reports showing how a market-based approach to the energy transition is not delivering at the speed or scale necessary to prevent climate disaster,²³ and reports on the need for a transformative politics of just transition.²⁴

Considerable focus has been put, understandably, on the need for transition in the coal industry:

- The CFMMEU Mining Division produced an important report analysing the different approaches to just transition and the different outcomes in Germany and the USA, titled 'The Ruhr or Appalachia? Deciding the future of Australia's coal power workers and communities.'²⁵
- The Victorian branch of the CFMMEU produced 'A Just Transition for the Latrobe Valley Community', which discusses means of providing alternative jobs, including in mine and power station demolition and rehabilitation, the need for industry diversification in the Valley, an industry-wide redundancy scheme, and alternative uses for brown coal. This document also raises the union's concerns about the integration of renewable energy into the energy system.²⁶
- Germany is often held up as the model to follow for transition in the coal sector, where its black coal industry shut down over a period of twenty years without forced redundancies. Its brown coal industry, much of it located in the eastern part of the country, is slated for full closure by 2038. This has not been without controversy, with many environmentalists arguing that this timeline is too long, and some workers and coal communities arguing for more structural adjustment funding. The most significant aspect of the closure strategy is the €40 billion earmarked for regional economic diversification strategies, showing an awareness that coal closure is about more than just retraining or finding jobs for directly affected workers.²⁷
- The Canadian Government's Taskforce on Just Transition for Canadian Coal Power Workers and Communities²⁸ identified seven useful principles to guide just transition:
 1. Respect for workers, unions, communities, and families;
 2. Worker participation at every stage of transition;
 3. Transitioning to good jobs;
 4. Sustainable and healthy communities;
 5. Planning for the future, grounded in today's reality;
 6. Nationally coherent, regionally driven, locally delivered actions; and
 7. Immediate yet durable support.
- Additionally, the Scottish Just Transition Commission²⁹ operates, given the following tasks:
 1. Plan, invest and implement a transition to environmentally and socially sustainable jobs, sectors and economies, building on Scotland's economic and workforce strengths and potential;
 2. Create opportunities to develop resource efficient and sustainable economic approaches, which help address inequality and poverty; and
 3. Design and deliver low carbon investment and infrastructure, and make all possible efforts to create decent, fair and high value work, in a way which does not negatively affect the current workforce and overall economy.

In various countries there are alliances between unions and other organisations pushing for climate action and just transition:

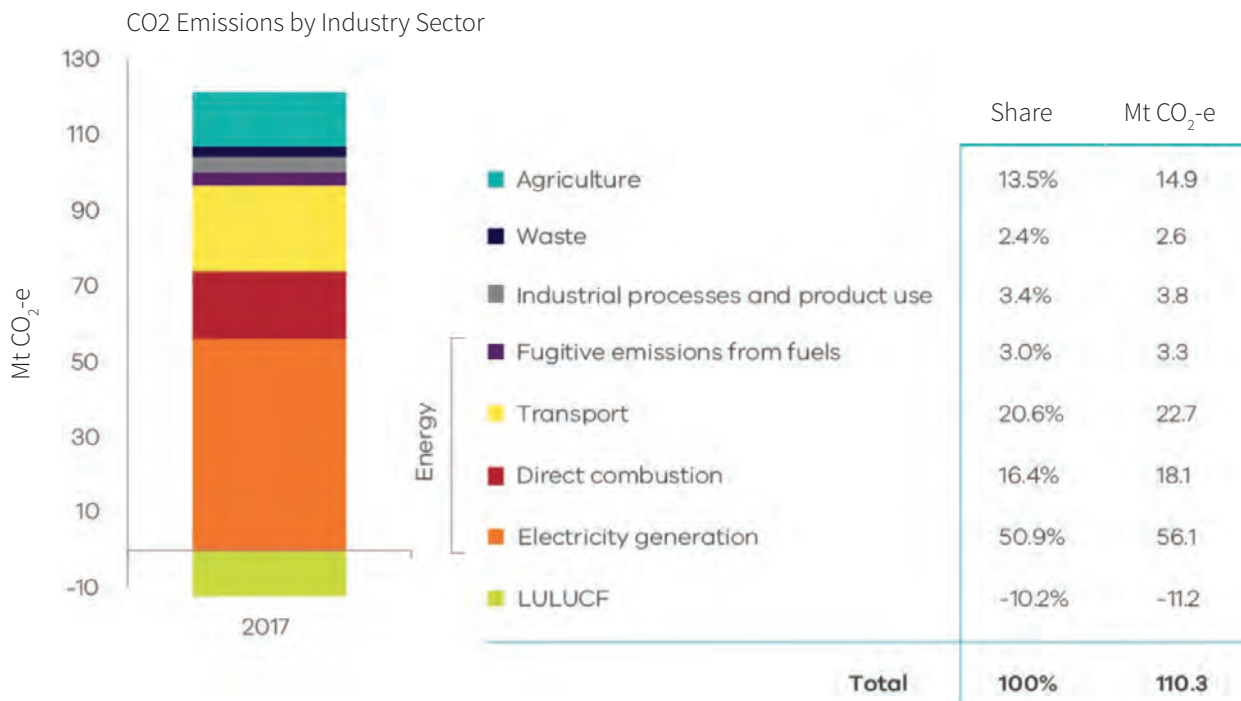
- In Western Australia, an alliance of organisation commissioned Beyond Zero Emissions to produce a comprehensive plan for the redevelopment and revitalisation of the Collie region from one heavily reliant on fossil fuels to one with new jobs in diverse, environmentally friendly industries.³⁰
- In the USA, the Blue-Green Alliance brings together unions and environment organisations to solve environmental problems while creating good new jobs.³¹
- In the UK, the Greener Jobs Alliance unites unions and student and campaign organisations to campaign for jobs and skills in the transition. It also provides education and training programmes around climate change for unions.³²
- In Europe, the European Commission has formulated a Green Deal to transform “the union into a modern, resource-efficient and competitive economy where
 1. There are no net emissions of greenhouse gases by 2050;
 2. Economic growth is decoupled from resource use; and
 3. No person and no place is left behind”.³³
- New jobs in sustainable industries are not automatically better jobs than those in fossil fuel industries. Concerted government, business and union efforts need to be made to ensure that secure, well-paid jobs are not replaced with casual, low-paid and low-skill work;
- Government investment and planning are essential to ensure that transitions give priority to affected workers, and overcome the market failures that are inhibiting the transition and leaving communities worse off;
- Active government policies to support redeployment, create new jobs, provide income support and training to affected workers are vital;
- Support for economic diversification of carbon-intensive regions is important;
- Good communication with unions and workers is critical as unions are key to ensuring justice for workers in the transition, and labour rights are fundamental to any just transition strategy;
- Public ownership of renewable energy should be a component of the new energy mix;
- Improved social safety nets are needed to reduce poverty and risks across transitioning societies;

Without analysing each of the individual documents listed here, it is possible to summarise key recurring themes:

- There should be a fair distribution of the costs of transition across the whole of society;
- Putting workers at the centre of the transition to a sustainable economy is essential to making the transition successful;
- There will be more jobs created in the transition to a sustainable economy than will be lost as fossil fuel industries close;
- Climate change represents a serious OHS risk to many workers;
- Climate change is an international problem requiring international solutions and solidarity;
- Coordinating bodies, such as just transition authorities, have been established in various parts of the world to coordinate public and private sector activities; and
- Policies need to take account of the gender dimension of climate change and just transition.

Victoria's challenges and opportunities

What do they mean for workers and unions?



Australia has a high-emissions economy. To a considerable extent, this is driven by our reliance on fossil fuels for electricity generation, but other factors include:

- Relatively old heavy industry plant and equipment;
- High rates of land clearance;
- Extensive livestock agriculture and other resource-intensive agricultural practices;
- High rates of car use and relatively poor public transport; and
- Low density urban areas, and relatively low energy efficiency requirements for construction.

This means that while transformation of energy generation is fundamental to the shift to a sustainable

economy, the electricity sector and its workers cannot be left to do all the heavy lifting on their own.

All Australian states and territories have adopted zero-emissions by 2050 targets. Achieving these targets presents challenges but also many opportunities. We expect that these targets are serious and will motivate policy in coming decades. It is clear that acting sooner rather than later will reduce the likelihood of harm and the economic cost of the transition. If they do not, and emissions levels continue to rise, or do not fall enough to enable Paris Agreement temperature targets to be met, the damage to the economy will be so significant as to make any opportunities meaningless. Failing to act to mitigate climate change is not, in other words, a valid alternative.

In this section we provide an overview of the challenges and opportunities in transforming various sectors of the Victorian economy towards a sustainable future.

ENERGY GENERATION

Challenges

Electricity generation causes 52% of Victoria's greenhouse gas emissions.

We acknowledge that the first stage to decarbonising the economy, as a whole, is to work with the energy sector to address its decarbonisation. Consistent energy policy is vital to investment planning, for both the public and private sectors, and to give confidence to industries, workers and communities that they can plan properly for transition. In the post-COVID-19 recovery, transformation of the energy sector to renewable energy will create substantial numbers of direct and indirect jobs, provide lower-cost energy for households and businesses, enable the development of renewable energy product markets and supply chains, and secure existing, and open up opportunities for new industries.

There are many challenges in transforming the generation and distribution of electricity. The main challenge, obviously, is decarbonisation. Reaching the state government's target of zero net emissions by 2050 will require the closure of the remaining fossil fuel generators and their replacement with various forms of renewable energy and storage, plus substantial improvements in energy efficiency. It also requires upgrades to the electricity distribution grid, including improved connection with other states.

One of the biggest challenges in decarbonising the electricity system is to ensure that the interests of the workers and communities who built and have driven the system that has underpinned the state's prosperity for so long are at the forefront of the transformation process.

Given the number of coal-fired power stations that have closed in recent years (around one third between 2012 and 2017), the commercial decisions of owners to reduce maintenance and maximise profits in a context of challenging wholesale electricity prices, and the strategic intention of some owners to reduce their carbon emissions, it can be expected that other power stations will close earlier than their nominal technical lifespans.

For Victoria, the forecast closing dates are: Yallourn in 2032, Loy Yang A in 2048 and Loy Yang B in 2038. However, as the experience of Hazelwood's closure demonstrates, and as the CFMEU Mining Division can attest, the impact of energy companies unilaterally closing plants, without adequate consultation with workers, can be hugely damaging. We must pre-empt this with our own preparations, and expectations of government, for alternative

employment and energy production.

Hence, and in this context, unions need to ensure that future closures are accompanied by adequate warning and full processes for workforce transition agreed between workers and their unions, government (including regulators) and owners, including the following elements:

1. Guaranteed new employment for all current workers who want it;
2. A job transfer scheme between closing power stations and those yet to close, with an obligation on employers to employ first from a redundancy pool;
3. Guaranteed job transfers into new energy sector jobs, including offshore wind, other forms of renewable energy generation, site rehabilitation and hydrogen manufacture;
4. Retraining for all workers who want it;
5. Enhanced redundancy, retirement and wage maintenance schemes for power station workers;
6. Mechanisms to hold companies to account for closure dates and redeployment, retraining and other commitments;
7. A plan for the replacement generation and its location;
8. A plan for the grid upgrades necessary to facilitate the energy transformation; and
9. Committed funding from employers and governments to ensure all elements of the plan are implemented.

Additionally, the following framework policies are needed to facilitate the energy transformation:

- Emission reduction targets that are compatible with keeping temperature increases to 1.5 degrees;
- Ambitious renewable energy targets that maximise the development of the renewable energy industry;
- Commitment to public agencies sourcing their energy needs from renewable energy sources, through, for instance, power purchase agreements with renewable generators, and installation of solar power on schools, TAFEs and early childhood centres, and other government buildings;

TRANSITION FROM CRISIS

- Direct public investment in renewable energy generation;
- The Victorian Government should establish a renewable energy generation authority to build, own and operate renewable energy assets;
- Support for the development of an offshore wind industry based in Victoria with a view to supporting its expansion across the rest of Australia and our region;
- The establishment of industry-wide collective bargaining in the renewable energy industry involving the relevant unions, with a commitment to improved terms and conditions of employment, including a preference for ongoing employment.

Further, all government-funded projects should be used to establish good employment terms and conditions;

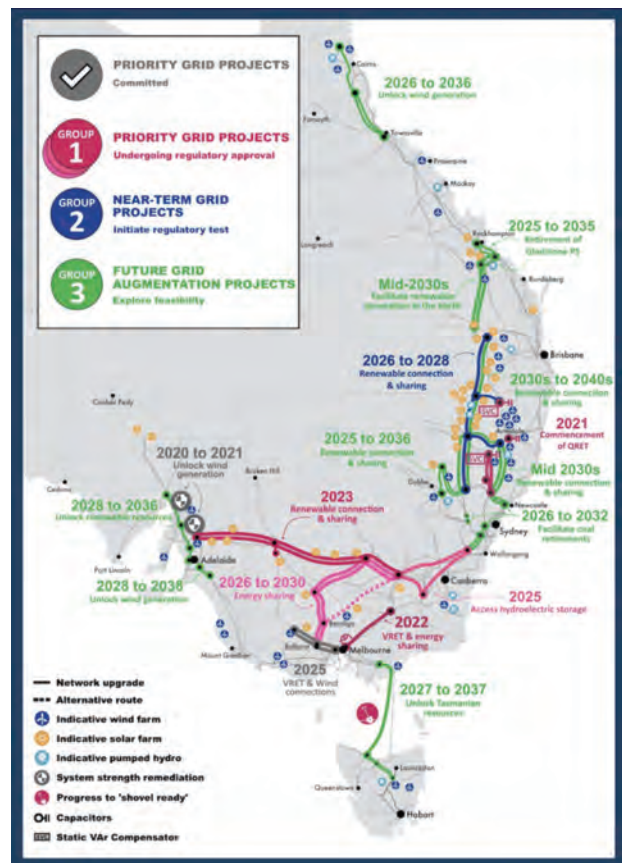
- Encourage energy efficiency, including by mandating installation of solar hot water systems in new houses, improved star-rating systems, mandatory efficiency standards in rental properties, and upgrades to public housing;
- Improve infrastructure and regulation for electric vehicles (EV) and other incentives to maximise uptake of EVs, and EV sharing schemes, including purchase of EVs for government fleet use; and
- Support for community-owned energy generation and retail projects.

Opportunities

While transforming the electricity system to renewable energy is complex, it is now clear that the technologies exist to achieve this in a relatively short timeframe.³⁴ This transformation, if done properly with workers and their communities at the centre, can provide substantial opportunities in:

- New renewable energy generation and storage construction, operation and maintenance;
- Grid infrastructure upgrades (See map at right);
- Production of zero-carbon hydrogen – including coal to hydrogen coupled with genuine and 100% carbon capture and storage. The trial project underway in the Latrobe Valley could start a much-needed viable industry for this community, potentially creating thousands of jobs if given the opportunity;
- Mine and power station decommissioning, noting that while restoration of mines is required by legislation in Victoria, there is no similar requirement for industrial sites, including power stations themselves (as distinct from their associated mines). The Victorian Government should legislate to require the dismantling and restoration of industrial sites after closure;³⁵
- Decommissioning of offshore oil and gas infrastructure as it closes (or, as is now becoming possible, conversion of platforms to hydrogen production); and
- Installation of renewable energy and storage in homes and commercial premises.

The Australian Energy Market Operator (AEMO) estimates that Australia requires 30-47 gigawatts of renewable energy to be constructed by 2040. This number could be substantially increased if Australia were to realise some of the potential of renewable hydrogen and become a renewable energy exporter.



Large-scale grid infrastructure upgrades necessary to create a renewable-driven electricity system.
Source: AEMO Integrated System Plan

There are currently 30 gigawatts of solar and wind projects with planning approval. Bringing these forward with the right policies would deliver 50,000 direct jobs across the country (many in Victoria) and many more indirect jobs.³⁶

While these are some of the opportunities directly related to electricity production, ensuring the job futures of workers and economic wellbeing of communities will also require economic diversification into other activities and sectors.

TRANSPORT

Challenges

Emissions from transport continue to grow in Australia and Victoria. They account for almost 20% of Victoria's emissions. This is due to low public transport provision, car reliance, relatively poor vehicle emissions standards, urban design and transport planning that emphasises car use, inadequate incentives and infrastructure planning for electric vehicles, and heavy reliance on roads over rail for freight delivery.

Opportunities

Reducing emissions in the transport sector provides substantial opportunities for workers and unions. Some of the opportunities for job growth include:

- Expansion of public transport, which provides large numbers of jobs in the construction phase, with more ongoing jobs than roads in the operations and maintenance phase, as well as ongoing jobs in customer service delivery;
- Reinstatement and expansion of regional and interstate rail lines, including freight lines, which would also have the benefit of improving economic connections between regional areas and Melbourne as the major economic and population centre, providing better economic diversification opportunities for regional communities undergoing transition; and

Decarbonisation of the energy and fuel sectors will be vital to decarbonise transport. Reductions in vehicle emissions are dependent on the uptake of electric or fuel cell vehicles, which is in turn dependent on large-scale expansion of renewable energy generation and hydrogen production.

- Manufacturing of electric or fuel cell vehicles and supporting infrastructure, such as charging stations. Given what has happened to the Victorian passenger car industry, future manufacturing and assembly is likely to be in the commercial vehicle sector, such as the SEA plant that is proposed near Morwell, but there may well be opportunities in vehicle design for companies that still maintain such capacity in Victoria. Establishing and maintaining the charging and refuelling infrastructure necessary to support electric and fuel cell vehicles will also create large numbers of jobs.

Additionally, transforming the way our urban areas are designed to reduce the reliance on cars will have health benefits, reduce household expenditure on fuel, and provide job opportunities for urban planners, designers and architects and public transport workers.

CONSTRUCTION

Challenges

The construction, operation and maintenance of buildings in Australia accounts for 25% of the nation's carbon emissions. The production processes for many of the materials that are used in construction - particularly cement, steel, aluminium and glass - are highly carbon-intensive. While sustainable building practices are increasingly being adopted, this is still at a small scale. Energy efficiency rating measures are still not used at a broad scale, while the carbon intensity of construction materials is rarely factored into decisions around construction types and processes. While the technologies are available now at little extra cost to construct zero-emissions homes, very few new houses are being built to this standard as they are simply not required to be.³⁷

The long life of buildings means that the decisions and actions we take now in relation to construction materials and design have long-term ramifications. Government stimulus measures for the construction industry should include conditions to improve the environmental performance of the industry and be targeted at projects that demonstrate low-carbon construction methods or that provide infrastructure necessary for the transformation to a low-carbon economy, such as electricity grid upgrades.

Opportunities

The scale of the construction industry means that improvements in its carbon efficiency will have major benefits for Victoria's efforts to meet the zero emissions target. It will also have significant economic, social and health benefits.³⁸ Beyond Zero Emissions estimates that targeting improvements in the energy efficiency of buildings could reduce Australia's energy use in buildings by 50%, reduce energy bills, and make for more productive workplaces and healthier homes.³⁹

Experience in other countries shows that targeting energy efficiency in the construction sector has had major benefits in terms of jobs, reduced CO2 emissions and reduced costs. For instance, after the GFC, Germany used programs for energy-efficient construction and refurbishment. Preferential loans for new residential constructions and refurbishments of residential, municipal, and social buildings set increasingly higher standards for energy efficiency. With government funding of €2 billion in 2016, the programs leveraged investments of €45 billion, roughly half of which was directly spent on energy efficiency measures. In 2016, more than 400,000 private residential units were financed, and 286,000 jobs induced. The subsidised buildings saved 1,730 GWh of final energy and 619,000 tonnes of GHG emissions in 2017.⁴⁰

In the US, post-GFC stimulus funding included US\$11 billion for building upgrade programs for homes, businesses, government buildings and public facilities such as schools and hospitals. Energy cost savings as a result of these programs returned \$2 for every dollar invested, while more than 200,000 jobs were created.

Decarbonisation of this sector will provide major job opportunities, including:

- Production of low-carbon cement, and other construction materials;⁴¹
- The large-scale expansion of the steel industry to make green steel using hydrogen produced with renewable energy-powered electrolysis. Australia is probably the best placed nation in the world, with our large renewable energy resources, to develop a green steel industry;⁴²
- Energy efficiency upgrades to existing buildings have the potential to be a major source of job opportunities. It is estimated that if Australian governments were to implement policies to accelerate energy efficiency in buildings, 34,000 new jobs could be created in residential energy efficiency alone. There are a further 86,000 potential jobs in commercial and industrial energy efficiency;⁴³

- Decarbonisation of energy supply will be vital to the maintenance of aluminium and other materials production in Victoria. Global aluminium manufacturers in particular are looking for low-carbon energy sources to power their smelters. Unless reliable low-emission energy can be provided for the Portland smelter, its future is likely to be subject to constant debate;⁴⁴
- Recycling of building materials could create substantial numbers of new jobs given the low level of recycling that currently takes place;
- Large-scale expansion of social and public housing (see below);
- Changes in the occupational scope of existing jobs, with training required in new construction technologies;⁴⁵
- More technical jobs particularly in the installation of renewable energy systems;
- Improved regulatory requirements around energy efficiency for new buildings;
- Government construction procurement should include requirements for use of sustainable materials and construction practices, and
- Large-scale projects should be required to have union environmental officers on site to monitor sustainability of materials and construction practices, both creating further jobs.

Additionally, a large-scale expansion (at least tens of thousands) in social and affordable housing is needed to deal with homelessness and housing affordability problems. Victoria has one of the lowest amounts of public housing amongst the Australian states with an estimated 82,000 people including children waiting for secure housing.⁴⁶

This expansion of public and social housing could be used to build more energy efficient homes, reducing CO2 emissions and reducing household energy costs, while creating large numbers of jobs in construction. Further jobs are created after construction as social workers and public servants are needed to manage and work with those tenants to ensure their ongoing health and wellbeing.

Major reductions in greenhouse gas emissions and improvement in the quality of urban environments can be obtained by improvements in housing and urban design. Siting and orientation of houses on blocks to maximise solar performance, location of windows, provision of eaves and other simple measures can make a substantial difference to the thermal performance of houses. Integrating

renewable energy, grey water recycling and green spaces into medium- and high-density housing are important to reducing CO2 emissions and the cost of running a household.

Building a concept of community into housing developments, whether apartment blocks or areas of separate houses, can produce more socially-connected neighbourhoods, with flow-on benefits in terms of reduced isolation, greater community

safety and neighbourhood pride. On a larger scale, improved urban planning that ensures that public green spaces and street trees, local shops, walking and cycling paths, and urban transport are integrated with housing developments will help to improve environmental amenity, ameliorate the urban heat island effect, and reduce car dependency. All of this can provide good jobs in housing and urban design, park maintenance, public transport and so on.



MANUFACTURING

Challenges

Direct combustion of fuels from stationary sources accounts for 16.2% of Victoria's emissions, the third highest of any sector. Manufacturing in Victoria and Australia has faced many challenges in recent decades for many reasons, including:

- Offshoring of production and automation;
- A previous high exchange rate due to the mining boom;
- Ageing plant and equipment coupled with lack of business investment;

- Closure of the automotive industry; and
- Absence of Australian government industry planning, tariff reductions and more.

Decarbonisation of the sector will depend to a considerable extent on the electrification of industrial processes (and thus the conversion of electricity generation to renewable generation), the substitution of hydrogen and potentially some plant-scale carbon capture and reuse or storage.

Opportunities

Although there are challenges for manufacturing, the shift to a sustainable economy presents many opportunities for job growth. In addition, the COVID-19 crisis exposed some of the problems caused by the hollowing out of Australia's manufacturing capacity. Shortages of medical and personal protective equipment, as well as disrupted supply chains, provided an indication of the vulnerability of the Victorian economy in emergency situations.

It also showed that if existing industrial capacity is supported through government assistance or contracts where needed, there still exists the skills and technological capability to produce and supply quality, in-demand products in a timely manner. Further government action is necessary to ensure that the opportunities for revitalising manufacturing are realised, as occurs in other countries.

Government action is necessary to ensure that the opportunities for revitalising manufacturing are realised, as occurs in other countries. Government neglect (especially at a Commonwealth level) contributed to the decline in manufacturing. This engagement is now crucial to its revitalisation. Although some of these policies are within the realm of the Commonwealth, Victoria has an interest in ensuring they are introduced:

- Legislate to phase in a target of 75% of national demand for petroleum, diesel, and aviation fuel is refined domestically to ensure continuity of capacity and work through changing energy technologies. If Australia is to transition to hydrogen and alternative fuels, it is important to get control of its fuels production and distribution system;
- Institute a guarantee for renewable hydrogen so that 100% of domestic demand is produced and refined in Australia; and
- Identify all supply chain shortfalls to mitigate against production delays and stoppages due to emergencies like global pandemics.

Some of the opportunities that Victoria could seize in relation to manufacturing include:

- Green steel using renewable power to produce hydrogen;
- Improvements to manufacturing processes, such as the CSIRO's "dry slag granulation process", which harvests blast furnace waste and converts it into a granulated product for use in cement production, saving water, heat energy and greenhouse gas emissions;⁴⁷
- Green aluminium through use of hydrogen or renewable power;⁴⁸
- Renewable energy products, ranging from hot

water systems to wind turbines, from batteries to solar panels;

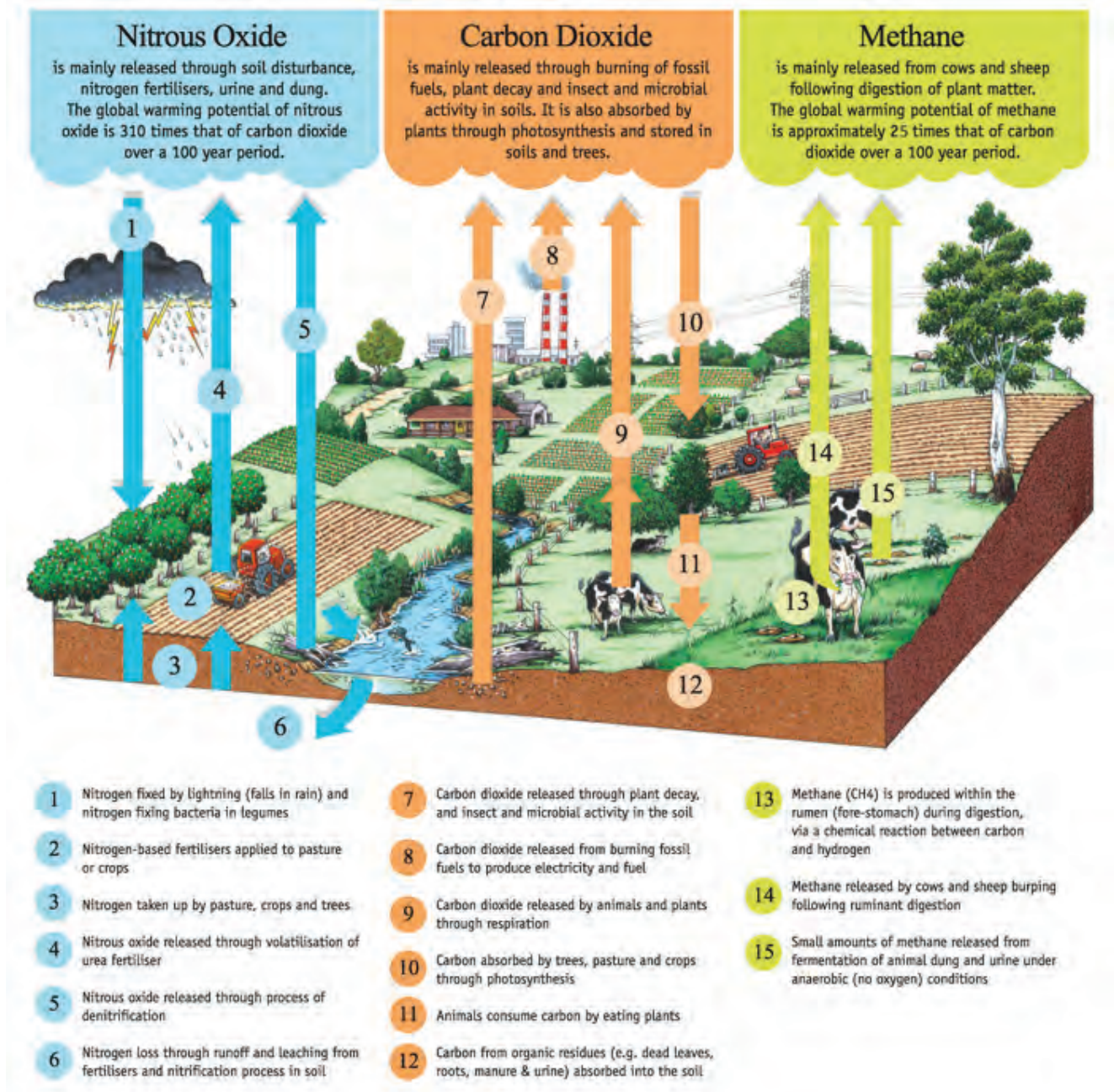
- Electric bikes, scooters and vehicles;
- Locally made supplies, adequate to deal with emergencies like pandemics;
- Innovative, low-carbon industrial products of various kinds;
- Green building materials, with requirements to include locally manufactured green building materials in construction projects would assist the maintenance and growth of the sector. For instance, Victoria's insulation manufacturing industry is facing a real threat as Fletcher Building has announced it is cutting 500 jobs; and
- Wood product manufacturing including products from modern processes such as cross laminated timber in recognition of the drive to lower embodied energy in buildings.

Expanding renewable power and heating in existing manufacturing facilities, regardless of specific industry, is vital. For instance, the United Workers Union's dairy members are looking to claim for this in regional Victoria as part of their next round of collective bargaining in order to deal with both the threat of climate change to their jobs (there are already dairy factories closing because of this) and the cost of energy (the increasing cost of energy was one of the factors that pushed the Murray Goulburn farmers' cooperative to closure).

Energy Transition Hub at the University of Melbourne estimates that the creation of a zero-carbon metals industry in Australia would create over 65,000 jobs and \$100 billion in export revenue.

Securing the future of aluminium smelting in a low-carbon Victoria

Alcoa's Portland aluminium smelter not only produces aluminium and provides hundreds of jobs in Western Victoria, it serves an important function of stabilising the electricity grid at times of high demand. Aluminium smelters are very high users of electricity, so if their "pots" are turned off for short periods – usually they can't be turned off for much more than an hour – they can reduce load demands substantially, a very helpful service provided to the grid during periods of peak demand. New technologies are becoming available to reduce smelters' energy use and, more importantly, give them much more flexibility in the way they can be used in demand reduction strategies. If the Portland smelter were retrofitted with this technology (at a payback period of between one and three years), and its supply of energy sourced from renewable generators, it would assure its future in the global aluminium supply chain, provide a vital grid stability mechanism, and provide savings and new sources of income (through payments for grid services) for the company.



Source: Agriculture Victoria⁴⁹

AGRICULTURE

Challenges

Agriculture accounts for 12.2% of Victoria's emissions and show little sign of reducing. Emissions are largely a result of livestock (especially the release of enteric methane from cows); large scale use of nitrogen fertiliser; disturbance of soils; clearing of trees and vegetation; the use of fossil fuel energy in production, transport and supply chains.

Agricultural workers are particularly vulnerable in a changing climate and climate change is already affecting agricultural workers in various ways, including:

- Drought reducing the productivity of dairy farms, with flow-on effects to milk processing plants and other dairy product manufacturers, some of which have already made workers redundant;
- Destruction of farmland by fire, with reduced output affecting jobs;
- Drought affecting the productivity of many farming activities, reducing direct farm and supply chain work;
- Drought affecting grape growing for wine, with reduction in the picking workforce required;

TRANSITION FROM CRISIS

- Severe weather and increased number of hot days making agricultural work more of an OHS risk;
- More regular dust storms, with accompanying health and safety risks, caused by drought and land mismanagement; and
- Changing management processes of irrigation regions, including increased automation, leading to restructuring of regional water authorities and job losses.

It should also be noted that labour conditions in the agricultural sector are already often poor, with high levels of insecure and seasonal employment, low wages, high levels of vulnerable migrant or visiting labour, poor OHS standards coupled with mistreatment of workers. Pressure on production is often transferred to labour, either through reduced pay and conditions, reduced staffing or safety short cuts.

Opportunities

The main benefits in the agricultural sector from taking necessary climate action include avoiding further harm, reducing the threats to workers' jobs and health, and preserving a viable food production industry. But reducing emissions would also bring opportunities through the growth of sustainable food production and other agricultural products. Strategies include:

- Protection of existing jobs through emissions reduction;
- Enable Victoria to grow its sustainable, high quality agricultural production, with increases in direct farm and supply chain jobs;
- Enable regions to build on their agricultural specialisations, such as the food and fibre work being carried out by the Latrobe Valley Authority in Gippsland;
- Building a supply chain from field to table for indigenous foods, including propagation of food plants, with guaranteed ownership by and participation of A&TSI workers and communities;
- Reduce the threat of destruction to land, production and jobs from drought, fire and extreme weather;
- Ecosystem restoration (including after fire damage) and mass tree planting;
- Growing and processing of medicinal cannabis, which could be integrated into the existing poppy processing industry; and
- Growing and processing industrial hemp, which has many uses, ranging from clothing to brake linings.



SHIPPING

Challenges

Australia's shipping industry has been long neglected or undermined by governments. As a result, the nation's strategic shipping fleet is inadequate for the challenges of a transformed economy.

Shipping has significant environmental impacts, especially through the burning of fuel oil and diesel by engines. Decarbonisation of fuels is technically possible, but some way off on a commercial scale.

Opportunities

- Develop fast passenger and vehicular ferry services among regional ports and to the Port of Melbourne or Hastings;
- Improve Commonwealth legislation to promote the use of coastal shipping, and modal shift of freight to shipping to reduce transport emissions;

- Develop zero-emissions ships using new fuels such as hydrogen and ammonia;
- Establish a strategic fleet by the Commonwealth, including an offshore wind construction vessel and an emergency response vessel to protect and supply coastal communities during bushfires or other crises;
- Ensure that the future decommissioning of Victorian offshore oil and gas facilities is undertaken to the highest standard that delivers the best possible jobs and environmental outcomes; and
- Require ships docked in Victorian ports to plug

into a shore-based power supply (cold-ironing), and ports to provide this electricity infrastructure using renewable energy.

If Australia develops an offshore wind industry, there will be a need for a fleet of vessels for construction and maintenance. Victoria should aim to be the leader in offshore wind and seek to procure a strategic fleet of vessels for the industry. Renewable hydrogen and ammonia are likely to be major exports for Australia, with the need for specialist vessels and crews. A hydrogen transport fleet should be developed by Victoria. Further, a hydrogen manufacturing plant that directly links to a dedicated hydrogen export (national and international) berth should be established.

WASTE

Challenges

The main sources of emissions from waste in Victoria are steel recycling, licensed landfill (including household organic waste), plastic recycling and paper/cardboard recycling. It should be noted, however, that when offsets are taken into account (i.e. if we account for the fact that recycled steel produces much less CO₂ than virgin steel) steel recycling has a negative emissions profile. Nonetheless, because steel recycling uses large amounts of electricity (which in Victoria, due to brown coal has very high emissions), there is large scope for reducing emissions by decarbonisation of the electricity sector.⁵⁰ Victoria exports a large amount of its waste to interstate and international processors. Reducing the amount

exported will be a significant challenge, although the recent refusal of some jurisdictions, particularly China, to accept Australian waste has focused efforts on dealing with waste creation at the source. The Victorian Government's new recycling policy goes a considerable way to improving the situation.⁵¹

The greatest challenge to reducing emissions and other environmental damage from waste is simply the reduction of waste. This requires the development of a circular economy, which represents major challenges to the way our economy has functioned for a long time.

Opportunities

Reducing waste and developing a circular economy represent very significant new economic and job opportunities. The Victorian Government estimates that its new recycling plan will create 3,900 jobs over the next ten years.

Beyond this, however, there are potentially significant numbers of jobs in process improvements, use of improved technologies and use of renewable sources of electricity (especially in steel recycling).

Job creation opportunities include:

- Increased levels of recycling, with new jobs throughout the recycling supply chain;
- Government procurement to encourage investment in and viability of closed loop

recycling (for example, procurement of locally produced photocopy paper made with recycled inputs and subsequently recycling for reuse in the same facility);

- New high-tech manufacturing processes in circular economy industries;
- Increased numbers of jobs for industrial designers;
- Greater demand for education and training for new processes and technologies⁵²; and
- Resource recovery through investment in appropriate waste to energy facilities that reduce the need for landfills, while not detracting from recycling and waste reduction as primary priority.



HEALTHCARE

Challenges

Victoria's public health system is a large consumer of energy and producer of greenhouse gases. It accounts for more than 1 percent of Victoria's total CO₂ emissions. Sustainability Victoria reports that in 2017-18 Victorian public health services generated approximately 35,000 tonnes of solid waste and of this approximately:

- 8,000 tonnes were recycled;
- 5,000 tonnes were clinical waste; and
- 22,000 tonnes were classified as general waste.

The disposal costs of this solid waste were close to \$17 million, of which half was for treating and disposing of clinical waste.⁵³

Increasing heat, extreme weather events, bushfire smoke and other climate-related events are increasing

the number of people in need of medical treatment. Healthcare workers, particularly nurses, are now, in effect, first responders to climate disasters. In some instances, as was the case with the 2019-20 bushfires, healthcare workers found themselves in the position of being the victims of bushfires, while also being expected to attend to other victims.

Healthcare is one element of the broader 'care' professions, which are likely to increase even further in importance in a future sustainable economy. Up to now, work and workers in the caring professions, who are predominantly women, have not been accorded the recognition they deserve. Shifting to the new climate-friendly economy will require a substantial revaluation of this work, with the importance of such socially useful jobs reflected in improved terms and conditions of employment, including reductions in insecure work, paid leave and higher wages.

Opportunities

- The healthcare sector broadly defined, including aged care, personal care and psychological services, is likely to continue on its expansion, with the potential for extra growth to deal with climate change;
- Incorporate the goals of Global Green and Healthy Hospitals (GGHH) into healthcare;
- Ensure that Healthcare is treated as an independent sector in zero emissions targets for 2050 with ministerial appointment overseeing same;
- Employment of fully funded and dedicated sustainability officers in public healthcare institutions to oversee mandated and funded emissions reduction strategies and targets;
- Increase use of renewable energy, through direct installation and PPAs, in health care facilities;
- Public health services should remain in the public sector. All health services should be subject to Government regulation and accountability with remuneration, conditions of employment and other entitlements comparable across sectors;
- Extend mandated nursing and midwifery ratios to private and not for profit health sectors;
- Mandate minimum use of recycled product in capital works;
- Include healthcare in national and state waste reduction and recycling strategies which must include circular economy principles and recycling activities that are compatible with material recovery facility operations. In Victoria, this means healthcare recycling that is compatible with Recycle Victoria; and
- Onshore manufacturing of healthcare equipment and products, including ventilators and PPE.

PUBLIC SERVICES

Challenges

The bushfires of 2019-2020 and the COVID-19 crisis demonstrated the importance of a high-functioning public service. The inability of Centrelink to cope with a massive increase in demand for its services showed the inevitable outcome of years of privatisation of public services, and cuts to budgets. Cuts to fire service budgets in some states played a role in exacerbating the bushfire crisis. We are yet to see the full extent of the virus' impact on sectors like public transport, energy generation and local government services, but we can expect the privatisation of these over previous decades to have increased their financial precariousness.

Both crises, but the COVID-19 crisis in particular, have

demonstrated the importance of public services and public servants. The financial robustness of governments, the public-spiritedness of their workers, and their capacity for long-term public-interest planning are vital ingredients for dealing with crises of all kinds, and the climate crisis in particular.

Outside crisis periods, the public service has played a vital role in climate research as well as policy development and implementation to help Victoria achieve its climate goals. This ranges across diverse policy areas, from setting emission reduction targets, to establishing state and national parks – the River Redgum National Park being a good recent example.

Opportunities

- End all forms of public sector austerity, privatisation and outsourcing;
- Increase direct public sector employment to reduce unemployment and to provide socially useful work in, for instance, renewable energy, community renewal and ecosystem recovery;
- Provide new public sector jobs in areas undergoing transition and facing job losses in other industries;
- Improve funding for social care services and other community agencies; the lockdown of public housing towers during the pandemic demonstrated the need for improved support for public housing tenants and migrants around community health, translation of government information, and interaction with government agencies. Increased public investment in such services would not only improve the lives of

public housing tenants and migrant communities more broadly, it would also create substantial numbers of jobs, including for people from these communities;

- Establish fully funded Community Resilience Projects across the state, with staffed shared community spaces and underwritten liability insurance to support the development of ongoing mutual aid networks, ensuring communities are more prepared for the next crisis;
- Increase government (state or local) provision of child care;
- Improve funding would enable conservation areas (such as the River Redgum National Park) to play a more effective role in ameliorating climate change;
- Increase funding for forest and fire management, including additional investment in maintenance personnel and equipment levels adequate to manage fuels 12 months of the year and to

Welfare services and climate change

Domestic violence and other social welfare agencies have reported higher rates of family violence during long heat waves. These events are already occurring more frequently as our planet warms, putting added pressure on agencies dealing with such issues.

safely and efficiently suppress bushfires during increasing seasons, would not only help to reduce bushfire risk, they would provide many job opportunities; and

- The state's public housing stock needs considerable renovation and new construction. This could create thousands of jobs while improving the living conditions of public housing tenants. A concerted effort to increase the energy efficiency of public housing, and its access to renewable energy would create jobs and reduce costs for housing tenants.



EDUCATION

Much could be done to reduce the carbon and waste footprint of Victorian schools, TAFEs, universities and adult and early childhood education facilities. However, the main role for education in the climate transformation is in the provision of education about climate change and training for new skills and jobs. Climate change or environmental sustainability must be a mandatory part of any curriculum taught in early childhood, schools, TAFE and universities. In TAFE, specific industry qualifications should incorporate training around strategies, design, material use and technologies focused on zero emissions.

Education should be seen broadly, to encompass not just scientific and technological knowledge, but also the social sciences and the arts. Knowledge based on science is critical, but we must equip our students with the capacity to problem solve and critically analyse the world they live in, so they have the skills to deal with the significant challenges of a rapidly changing world due to climate change. Climate change action will increase the already strong demand for education and training, with individuals needing new skills to operate in rapidly changing industries and a low carbon economy.

COOPERATIVES

In many countries, cooperatives have long been important to local economic development. Because cooperatives are able to deliver broad social as well as economic benefits, and are based on democratic participation, they are increasingly being seen as a great structure for companies that have an environmental focus.

The worker cooperative model has a long history in many parts of the world, including the Evergreen Cooperatives in Cleveland,⁵⁴ the extensive network of Northern Italian cooperatives in Emilia Romagna, and Mondragon in Spain.⁵⁵ Mondragon particularly demonstrates the potential of the cooperative model: its 264 businesses and cooperatives employ more than 82,000 workers and have more than €1.2 billion in revenue. The core principles of the Mondragon model are cooperation, participation, social responsibility and innovation. These are underpinned by the cooperative values and principles adopted by the global cooperative movement:

1. Voluntary and open membership;
2. Democratic member control;
3. Member economic participation;
4. Autonomy and independence;
5. Education, training and information;
6. Cooperation among cooperatives; and
7. Concern for community.⁵⁶

Earthworker in Victoria has also adopted additional principles:

1. Sovereignty of labour;
2. Instrumental and subordinate nature of capital;
3. Wage solidarity;
4. Social transformation; and
5. Universality.

The great strength of worker cooperatives is that they radically alter the relationship between workers, their work and workplaces. Workers in cooperatives own their businesses, make decisions for themselves (including sometimes appointing managers), ensure that profits are fairly distributed, and minimise wage and power disparities. Worker cooperatives emphasise democratic decision making at the workplace, and, especially when part of a cooperative ecosystem, such as in Emilia Romagna or Mondragon, extend democratic control over local economies. Bob Cannel, a founder of Cooperatives UK, puts it thus:

Cooperatives are democratic. The workers and other members decide what to do with all the value they create. More is distributed in the community via higher wages and local purchasing, in most cases. Regions where co-operatives form a substantial part of the economy, such as Emilia-Romagna in Northern Italy, enjoy higher levels of community wealth.

Cooperatives generally have better longevity than ordinary private businesses, and, because they are not beholden to shareholders or other profit-takers, are able to reinvest in the cooperatives' growth and their members' wellbeing, and that of their communities. A report prepared by EY in 2014 concluded:

Australian cooperatives and mutuals can create substantial commercial value. They can also create broader value which is often not captured in financial disclosures, such as contributing to the wellbeing of individuals, the delivery of public services, building resilient communities, and thriving local economies.

Networks, or ecosystems, of cooperatives are able to share resources; cooperation in research and development, capital allocation, and innovation is much more effective than wasteful competition.

Cooperatives and unions have a shared mission if their goal is to increase workers' autonomy and control over their working lives. Even in the best private firm workers will be in a structurally subordinate position; the role of the union will be to ameliorate that subordination and advocate for the position of labour. Cooperatives, on the other hand, should be seen as partners with unions in the creation of new forms of worker power. This means for cooperative members that union membership is fundamental if they are to be truly engaged in this partnership.

This partnership between unions and cooperatives can be part of a concerted effort to develop a democratic part of the economy through a generalised spread of cooperative ownership, especially workplaces, jobs, goods and services to deal with the climate change challenge. Such an ownership model, within a mixed economy, can set the ecological and social benchmarks we all require but currently do not have the systemic means to meet.

A number of policies will be important to develop the cooperative economy as part of a broader just transitions and economic recovery strategy, including:

- Unions providing support to members interested in forming cooperatives, a strategy already embarked upon by the United Workers Union;
- Establishment of a Cooperative Development Agency, to assist with the establishment of cooperatives, including financing and start-up capital; and
- The development of a state government policy on supporting the cooperative economy, including loans and tendering opportunities.



Gender implications

Australia's workforce remains subject to considerable gender segregation, disproportionately so compared to other OECD nations. Our national gender pay gap has remained relatively static around 15% to 19% for the past two decades.⁵⁷

Blue collar work, especially in fossil-fuel industries such as coal mining and electricity generation, is heavily male-dominated. This has multiple ramifications. Some blue collar work is already under pressure from non-climate related forces, such as deindustrialisation and automation. Decline in the size of the manufacturing workforce is a result of a number of long-term processes, including:

- Offshoring by companies, which in turn is related to the globalisation

of product markets, transformation of supply chains, and the massive expansion of the global workforce, particularly as a result of China's return to the world market;

- Over-capacity and relatively weak demand in the global economy;
- Technological change, including automation; and
- Decisions by Australian governments, financiers and corporations to

concentrate on mineral extraction over processing and manufacturing, which had implications for the allocation of capital, tariff rates, and for the exchange rate, that did not favour domestic manufacturing.

Deindustrialisation does not just affect male workers though. The textile, clothing and footwear industry, for example, employed many women, especially from migrant backgrounds, and its decline reduced their opportunities considerably. The decline of a reasonably broad-based industrial sector – with the latest victim being the car industry – has meant that remaining blue collar industries are heavily concentrated in sectors with predominantly male workforces, namely construction, mining, energy, and manufacturing. These industries tend to provide well-paid jobs and have a relatively high level of unionisation (the two being closely connected). The other characteristic of these industries is that they tend to be large producers of greenhouse gases and must now go through energy transformation.

Some conservatives have tried to stir up a sense of fear about climate action among male workers in carbon-intensive industries, as part of a broader politics of resentment and division focused on gender. Whilst we must be alert to this kind of politics, it is still important that action to transform polluting industries be considered through a broader gender analysis, which we have sought to do throughout this document.

Some important gender-related aspects of the transformation to a sustainable economy include:

- Many industries that are experiencing the impacts of climate change, such as food production and agriculture, have large numbers of women workers. Climate change is not just an issue for male-dominated industries;
- Employment and training policies in transitioning industries must take account of the specific needs of blue-collar, predominantly male, workers. In many regions these workers are experiencing the most substantial loss of employment opportunities, with flow-on economic, social and health problems;
- Employment and training policies for new and transitioning industries, including renewable energy generation, must actively seek to increase gender diversity, including specific pathways for women entering the sector as well as retaining women once they enter the industry;
- Old stereotypes about the gendered nature of work must be challenged. Women can work in construction, and men can work in nursing, for instance. While we must be careful to ensure that displaced male workers are not left behind, encouraging gender diversity in new industries is an inherently good thing;
- Caring professions, including disability and mental health workers, are female-dominated. During times of crisis, these professions (dubbed ‘essential workers’ during COVID-19) are expected to work harder under increasing demand, and often put themselves and their families at risk. Workers in these industries must have access to appropriate leave, adequate crisis allowances, and safety equipment to allow them to work in safety during crises. For many workers, award rates of pay do not adequately recognise the essential work they perform in times of crisis for the most vulnerable in society. Improving rates of pay for these workers is vital to the just transition.
- The union movement is now majority-female and the biggest unions are dominated by women. Their voices must be heard and elevated within the labour force in discussions about climate change; and
- We must reject efforts to turn climate action rhetoric into a narrative about embattled “salt-of-the-earth blue-collar blokes” versus feminised inner-city new-economy “caring” types. The needs and interests of men and women workers sometimes vary, but in the economic transformation needed to deal with climate change, all workers have a fundamental unity of interests and purpose.



New ideas about the future of work

Beyond essential skills training and workforce planning, there is a role for governments to decide what sort of economy and jobs we want to have.

The COVID-19 crisis has taught several hard lessons:

- Despite superficial signs of prosperity, many workers live from pay cheque to pay cheque, with large mortgages or high rents posing an ever-present threat if their incomes were to be interrupted even briefly;
- High levels of job insecurity (what advocates call, euphemistically, a “flexible labour market”) place most of the risk associated with economic fluctuations on the backs of individual workers and their families; and
- Young people and women have been disproportionately harmed by the economic downturn, as they are more likely to work in hospitality, retail and entertainment, all sectors badly hit, and more likely to be insecurely employed.

What this tells us is that, although Australia, and Victoria, have managed to maintain relatively good levels of employment during the shift from an industrialised economy to one heavily dominated by service industries, the nature of employment has fundamentally changed. This is, of course, well understood and much commented on: the difference between jobs in large-scale factories producing industrial goods and working as a barista in a café is enormous. Changes in the structure of work have combined with changes in the regulation of work, and of unions, to create a much more insecure workforce. The end result has been declining productivity growth across the economy, since productivity improvements are much harder to achieve in most service industries that are reliant on human-to-human interaction, and a steady decline in labour's share of national wealth.

Vital to the system that inflicted such insecurity on the workforce has been a social welfare system seemingly designed to brutalise those unfortunate enough to be exposed to it. Unions have a deep interest in how welfare operates, and how it interacts with the world of work. The UWU's demand for a job guarantee and a liveable income payment are worth exploring, although University of Newcastle's Prof Bill Mitchell's concept of a job guarantee to prevent any involuntary unemployment alleviates the need for a liveable income payment on a large scale. Mitchell's proposal also has the benefit of enabling the government to target its spending towards socially useful employment, as well as providing a means to mitigate the inflation risk that may sometimes accompany large-scale deficit spending.

Some unions are considering ways in which the strengths of these various proposals can be combined, while the weaknesses eradicated. One idea proposed that offers enormous industrial, organising, social, environmental and economic benefits, while potentially appealing to multiple movements – union, environmental, social welfare – is a job guarantee combined with a reduction in working hours to 30 a week. Such a proposal could have the following benefits:

- Full employment and resulting reduction in the harm caused by unemployment;
- Greater work-life balance and greater sharing of available work;
- Reduction in the domination of work over people's lives, while still allowing them to benefit from the social and identity aspects of paid employment;
- More time for family life or community participation;
- Reduction in commuting, with concomitant decrease in pollution, and less demand on road and public transport infrastructure;
- Greater ability for workers to vary their working hours to accommodate the demands of their families; and
- Potential to reduce the demands on women to manage both work and households – although the extra hours available to men would still require substantial cultural and educational change to ensure they used some of them to help more around the home.

Additionally, a full and frank discussion about the social value of work is overdue. There are, of course, risks in trying to suggest that the work of some is more important than the work of others, although it is true. Work should be a means to an end – a decent life lived with family and friends – and the point of unions throughout history has been to make sure that the means (work) do not crush the end (a decent life), and to increase the opportunities, time and income available to workers to enjoy life outside the cage of capitalist relations.

This also means ensuring that jobs and work that have not traditionally been valued because they don't contribute to the maximisation of profit – jobs in the caring professions, for instance, jobs very often performed by women – must be elevated and their workers treated accordingly. It also means giving serious thought to how unpaid labour – again, often performed by women – can be recognised and valued, without subjecting it to the commodifying and destructive logic of capitalist employment relations.

Despite currently being faced with multiple crises and members in great need, unions are ready to engage in these debates as it is during times of crisis that the conditions of the new normal are created.



Our strategy

Our just transition and economic recovery strategy involves several different strands from workplace organising and delegate training to policy advocacy.

INDUSTRY PLANNING & POLICY ADVOCACY

Industry planning has long been neglected in Australia, unlike other countries. Planning must also come with a commitment to redevelop industrial capacity, rather than to focus the majority of the nation's efforts on resource extraction. Thus, industry planning means taking a long-term strategic approach to workforce development, training and education, supply chain planning and technological development.

Industry planning should be tripartite, involving government, unions and employers. Industry plans, especially when they involve restructures and transitions, should not be imposed by governments against the will of those effected but should be preceded by respectful dialogue, with strategies subsequently developed in collaboration and with the consent of the workers and the communities impacted and must necessarily have a spatial or place-based dimension because many industries are concentrated in particular regions. Similar worker-focused measures such as job guarantees, training and supported retirement as are necessary in the power generation sector may well also be necessary in different industries and should be integrated into industry planning.

The following industry plans are needed:

- Low-carbon manufacturing industry plan, including a Victorian green metals industry plan;
- Green hydrogen, vital to the decarbonisation of metals manufacturing and will also be important to the decarbonisation of other industries, electricity generation and transport;
- Electric vehicle plan, including manufacturing, incentives for purchase, charging infrastructure, grid integration. It should be noted that many types of electric vehicles will be necessary, not just passenger cars, the domestic manufacture of which Australia has allowed to end. Commercial vehicles of various types could be manufactured in Victoria, as is proposed by SEA Electric in the Latrobe Valley;
- Cement production plan, vital to the decarbonisation of the construction industry;
- Ecosystem recovery and preservation plan, including reforestation and tree planting, ecosystem repair (especially after fires)
- Unlike the Victorian Forestry Plan, a genuinely tripartite plan for Victorian timber communities based on the principles of just transition for workers impacted due to changing resource availability, including fair transition support compensation and worker retraining packages; and sustainable development for communities including ongoing sustainable native forest management, viable growth of the plantation estate and economic diversification.



- Public transport plan, vital to the decarbonisation of the transport sector. Planning should take into account regional as well as metropolitan public transport needs, as well as whole-of-supply chain needs, including for vehicle manufacture; and
- Growing the cooperative sector of the economy, with particular support for those union-based cooperatives already operating, including Earthworker Energy, Cooperative Power and Redgum Cleaning Cooperative.

Procurement policies are vital to improve industry development and employment opportunities in Victoria, while the state government can use its policy initiatives to guide industry development more broadly. State and federal governments should commit to direct investment and job creation in regions undergoing transformation.

TRAINING THE WORKFORCE OF THE FUTURE

The Plumbing and Pipe Trades Employees Union (PPTU) understands challenges associated with climate change and was the leading force in the creation of the Plumbing Industry Climate Action Centre (PICAC). PICAC is a national non-profit network of training hubs delivering vocational skills to transform the built environment to adapt to climate change, reduce greenhouse gas emissions, and create new jobs.

Since 2008, PICAC has trained and upskilled over 10,000 apprentices and working professionals in the plumbing, gas, fire protection, heating and ventilation industries. PICAC is a unique collaboration of all key industry participants where employer and employee representation combine, ensuring industry needs are met through cost-effective, industry-relevant, trade skill-specific high quality training.

The first training facility opened in Brunswick, with the primary purpose to provide courses in Green Plumbing, in order to address the skills shortage in sustainability within the industry at the time. Since then PICAC has evolved and now offers courses supporting the entire career life cycle of plumbing, ranging from pre-apprenticeship and Certificate III courses through to a range of Certificate IV and post trade courses.

Through this evolution and expansion, PICAC has become the premier Centre for Excellence in training for the plumbing and pipe trades. Our Narre Warren campus is the first net-zero education and research facility in Victoria. It will generate all energy required to support the operation of the building on site through the incorporation of several renewable energy technologies. The Narre Warren facility is shared by PICAC and the International Association of Plumbing and Mechanical Officials (IAPMO). IAPMO are one of the world's leading plumbing product certification agencies, and the site houses IAPMO Oceania's new research centre and product testing laboratories.

PPTU members and the plumbing industry as a whole benefit from sharing the facility with IAPMO as innovation and evolving technologies can be identified quickly as they progress through the IAPMO certification process.

The PPTU is also active in the area of equipping the plumbing and pipetrades workforce to unlock the future of safe and renewable hydrogen. PPTU is leading the way in Queensland to assist industry to address the hydrogen trade skills shortage by creating a Hydrogen Centre of Excellence at our PICAC campus at Beenleigh, Queensland. The only one of its kind in Australia, the centre will train industry and give PPTU members the skills required to deliver the Queensland government's hydrogen and green future plan. The centre will consist of world-class training areas, with separate zones where vocational training is undertaken safely on regulated supplies of hydrogen.



GOVERNANCE STRUCTURES

It has already become clear that governments need to play a lead role in dealing with the climate crisis. A market-focused approach has proved unable to deal with the crisis: Sir Nicholas Stern famously described climate change as the biggest case of market failure in history. Private investment and businesses will make important contributions to dealing with the problem, but the very absence of sound climate and energy policy at a national level in Australia, and the resultant problems that this absence has created, demonstrate the need for active government policy and engagement better than anything else.

In the absence of sound Commonwealth government climate and energy policy, state governments are having to take a lead role. Many, including the Victorian Government, are already doing so, especially by setting good renewable energy targets. But it should also be recognised that state governments can guide industry development, create jobs, improve labour standards, reduce CO₂ emissions and hit renewable energy targets by direct investment, especially with the cost of capital at historically low levels, and with growing challenges to private investment from market uncertainties and larger economic problems.

Nevertheless, the Commonwealth Government, as the COVID-19 crisis has demonstrated, has powers of economic intervention that the private sector and the states do not have. While the States can do much, action on the scale that is needed to avert climate disaster requires the Commonwealth to do its bit, particularly to provide the spending required. This means that, while this strategy is focused on Victoria, we must continue to demand sound Commonwealth climate policy.

Just as the energy generation and use systems that we have inherited from the 19th and 20th centuries need overhaul to deal with the challenges of the 21st, we need to create new governance structures to guide the transformation of the economy to a zero-carbon future. Some possible ideas are listed below:

- First Nations people need to be consulted on planning for location of infrastructure and industries, and to be given priority in training, education and employment opportunities in new industries. Consideration must be given to First Nations people in communities undergoing transition from reliance on carbon-intensive industries. The autonomy and financial independence of First Nations people's organisations can be strengthened by

partnerships between government and those organisations in decentralised renewable energy generation. First Nations people's land-use and care practices offer many important insights for the care of country;

- The Latrobe Valley Authority (LVA) has been important to managing the effects on the Latrobe Valley of the closure of electricity generation infrastructure and other industrial restructuring. The Authority should be retained while the restructuring of the Valley continues, to assist with the eventual full closure of all coal-fired power stations. Further, similar transition authorities should be established in all other regions of the State, coordinated by a state level Just Transition and Economic Recovery Authority. Expansion of the LVA to play the central coordinating role for the regional authorities could be considered. Whatever the eventual structure, the fundamental requirement is for coordination of the various government departments and agencies with an interest in the social and economic transformation necessary to achieve decarbonisation goals;
- Similar to CleanCo in Queensland, Victoria should have a government-owned renewable energy generator focused on boosting the amount of renewable energy available while ensuring that energy is affordable and jobs in the generation industry are secure and well paid;
- Worker representatives on company boards have been important to better transition processes in Germany, and to the overall functioning of workplaces. Improving worker and union representation in company management structures would allow greater workplace democracy, harness the ideas of workers, increase productivity and facilitate longer-term planning for just transitions; and
- Investigate opportunities in deliberative democracy, including local, regional and state-level citizen juries and other such processes to engage citizens in the work of society-wide transformation. The COVID-19 lockdown has demonstrated the potential of virtual meeting technologies. Not only do these offer means of conducting more business without costly and polluting travel, but they also provide opportunities for better inclusion in government consultation and decision-making processes.

During the lockdown, for instance, the Smart Energy Council held a large-scale free conference involving state energy ministers, which provided an excellent means of direct contact between ministers and the broader public. Widescale and frequent use of such events would help to develop

better understanding among the population of the energy transformation, reducing the uncertainty and fear that have been deliberately fostered by vested fossil fuel interests to prevent needed action.

EDUCATION AND TRAINING

Workforce planning

Australia's workforce planning system needs substantial improvement. For instance, there is no comprehensive national data on the number of jobs in renewable energy, the types of jobs, their skill requirements, and their location. Without this data it is difficult to properly plan for training provision.

It is likely that similar data deficits exist in other industries. Thus, a key need is an audit of the data quality for workforce planning in key industries, including:

- Renewable energy and other elements of the

energy system, such as grid infrastructure;

- Energy efficiency;
- Ecosystem restoration, including tree planting;
- Green metals; and
- Green hydrogen.

The revitalisation of the industry skills councils is important to understanding the workforce planning needs of various industries.

Retraining for workers in industries undergoing restructuring

"Retraining—especially when used as a preventative measure rather than a reactive response to plant closure—is the most effective method for preventing unemployment and long-term unemployment. This training needs to occur well before retrenchment to be most effective in the transition to decent work. It should also be provided without cost to those workers". (CFMEU)⁵⁸

The following elements are important to retraining packages to deal with climate change-related restructuring:

- Skills audits, recognition and retraining to commence early, well before closure of any plant or factory;
- Skills audits focussed on the recognition of prior learning and skills developed on the job with the aim of workers being able to demonstrate their competencies including through the attainment of qualifications, skills sets and or units of competency (with any additional training or assessment required if needed)
- Skills audits, recognition and retraining costs should be covered in full by employers or government, including transport, dependants care and relocation costs;
- Retraining packages should, where possible, be fully or partially part of existing approved

qualifications, so that workers achieve proper recognised qualifications or can build on units later to achieve a qualification;

- Introduction of peer counselling services during transition;
- Employment placement services;
- Priority should be given to using only public TAFEs and not-for-profit training providers, that have a close connection to workers in that industry; and

Retraining

One of the most recent examples of retraining that we are aware of in Victoria has been the Gippsland Trades and Labour Council's work with workers displaced by the closure of the Hazelwood power station in Morwell. Despite the short notice of the power station's closure, the GTLC, working with the Latrobe Valley Authority, helped hundreds of Hazelwood workers, and workers from the Carter Holt Harvey plant, to retrain, acquire new qualifications and get new jobs. The success of the scheme has much to do with the GTLC being a union organisation, its close connection with the local community, and its focus on achieving the best outcomes for workers rather than delivering profits or meeting compliance requirements. These characteristics should be the fundamental characteristics of retraining services.

- A funded role in the brokerage of skills audits, retraining, employment placement services, career transition advice, financial support and job search assistance for coordinators who are directly recruited from the cohort of workers to be made redundant (with support from unions and tripartite industry bodies with requisite

sector specific experience).

Importantly, retraining is useless if there are no jobs for retrained workers to go into. The most important element of a retraining package is the direct creation of jobs for redeployed workers to go into.

ORGANISING

Climate change will have ramifications for most industries and there are few workplaces that will not be affected in some way by the need to reduce greenhouse gas emissions. This means that climate change will be a workplace issue for most workers:

- Outdoor workers will be exposed to more days of extreme heat;
- More frequent extreme weather events will shut down workplaces or prevent workers from getting to work. This happened on a large-scale during the bushfire crisis;
- Job losses could occur in some industries as a result of climate-related damage. Tourism is particularly vulnerable, as tourism workers on the Great Barrier Reef and in bushfire-affected regions know;
- Drought puts pressure on rural industries, with job losses, reduction in work, or changes in production and shifts;
- Emergency service workers will be called on to deal with destruction caused by climate disasters or health problems caused by increased heat or extreme weather;

- Getting to and from work may get more difficult during times of intense heat, when public transport systems break down;
- Businesses may seek to reduce increasing costs of, for instance, insurance, adaptation to changing product markets, stranded assets or increased air-conditioning use by seeking to reduce wage costs; and
- On a positive note, workers might seek to reduce utility costs of their employers and channel savings into improved wages and benefits.

For all these reasons and more, unions will need to increase their workplace organising capacity around the issue of climate change and VTHC will work with affiliates to develop a kit for workplace organising around climate change.

Younger workers are particularly concerned about climate change and tackling the issue of climate change in the workplace is a good way to engage this cohort, for many of whom unions are not well understood.

A NETWORK OF JUST TRANSITION COMMITTEES

Although the ACTU, VTHC and a number of unions have dedicated just transition positions, there will be an increasing need for the movement to dedicate more resources to just transition and to create appropriate structures to ensure it properly informs our work.

VTHC will work with the ACTU and affiliated unions to participate in, or establish if needed, national and state level just transitions committees to formulate

policies around just transition, provide support to individual unions, engage with state climate and environment organisations, and provide a conduit into national-level decision making.

VTHC will also work with unions that wish to establish their own Just Transition committees (howsoever called) to develop union policies and organising strategies, and to provide a conduit into state and national-level decision making.

BARGAINING FOR RIGHTS AND ENTITLEMENTS

Several unions have already engaged in bargaining around clauses related to climate change or the environment. There are many reasons why unions

might want to bargain around climate issues, including to:

- Increase consultation or negotiation rights around workplace change;
 - Improve redundancy, redeployment or retraining entitlements, especially in industries undergoing transition;
 - Establish joint management-union workplace committees to improve a company's environmental performance or reduce its emissions;
 - Introduce clauses that provide benefits to workers from, for instance, covering a warehouse roof with solar panels, or the so-called Earthworker clause, which allows workers to direct some of their pay through their employer's payroll to purchase solar hot water services;
 - Improve safety provisions around excessive heat, or bushfire smoke;
 - Improve leave provisions around forced absences from work due to sickness (an issue brought to the fore by COVID-19) or disasters;
 - Provide protections around stand-downs during extreme weather events or even electricity system demand management episodes; and
 - Provide for planning, notice periods, training commitments and job transfers in case of plant closures.
- For further reference, 'Adapting Canadian Workplaces' provides an online database of collective agreement clauses from around the world.⁵⁹ VTHC will work with interested unions to provide assistance with the drafting and negotiation of such clauses.

Example: Union agreement clause

The CPSU and the Victorian Government are committed to working together to achieve the target of nett zero emissions from Victorian public sector operations by 2025 in a way that maximises public and workforce benefits while minimising negative effects on public sector workers.

The [Department or agency] and the union[s] agree to establish a Joint Sustainability Committee (JSC) with [specify union and management membership] to assist with the attainment of the goal of ensuring that the Victorian Public Sector is carbon neutral by 2025. The committee will have the following Terms of Reference:

To examine and provide recommendations for implementation to [Department/Agency heads] about the following matters:

- i) the procurement of renewable energy supply for government buildings;*
- ii) means of reducing energy consumption in government buildings and facilities;*
- iii) the procurement of equipment, resources, other materials, and services in such a way as to contribute to the goal of carbon neutrality;*
- iv) ways of performing work that reduce carbon emissions;*
- v) Any other activity that contributes to the achievement of the carbon neutrality goal.*

To ensure that a substantial proportion of the benefits, including financial benefits, of the reduction of the public sector's carbon footprint is distributed to public sector workers by a process of negotiation between the CPSU and [the relevant public sector bargaining unit].

To develop and recommend just transition principles and policies for adoption in cases where jobs are affected by the implementation of the carbon neutral goal. These principles and policies must provide no lesser rights or entitlements for staff than those provided in other parts of this agreement.

To develop guidelines that ensure that avoidance or diminution of the effort to achieve carbon neutrality do not result from contracting out or privatisation of public sector activities.

- To provide ways for staff to participate in the effort to achieve the carbon neutral goal.*
- To recommend ways in which staff can reduce their own carbon footprint, through, for instance, using payroll deductions or salary sacrificing arrangements to encourage the use of public transport or the installation of renewable energy systems in workers' homes.*

The Committee will be established within three months of this agreement coming into force, and will continue to perform its functions for the life of the agreement. The parties also agree that subsequent agreements should maintain the Committee's existence, subject to agreed modifications as deemed necessary by the parties.

Union delegate members of the Committee will be provided with adequate time release to perform their Committee duties to a professional standard and to allow the Committee to perform its work effectively.



DELEGATE AND ACTIVIST TRAINING

Making sure that the importance of climate change as a union issue is widely understood amongst delegates, activists and members is vital to the success of this strategy. Unions have always understood the importance of education and training to their goals and dealing with climate change requires a similar commitment. Helping our members understand the science of climate change and how climate change and action to deal with it are relevant to the world of work is vital. Organising strategies are essential to workers taking control of the transformation that is needed:

- The E tū union in New Zealand has done intensive work training delegates to engage in debates and policy development in Taranaki, where the oil and gas industry is undergoing significant transition. Delegates have been vital to bringing the workforce along during the development of the Taranaki 2050 Roadmap.⁶⁰

- The Greener Jobs Alliance in the UK provides a free online training program, A Trade Union Guide to Just Transition.⁶¹
- The Murphy Institute at the City University of New York provides a climate change immersion program for union leaders and staff.⁶²
- Adapting Canadian Work and Workplaces to Respond to Climate Change maintains a database of climate-related education and training materials.⁶³
- The ITF has developed a climate justice education and training program.⁶⁴

Drawing on these various programs, VTHC will work with interested unions to develop delegate and activist training packages to assist in organising around climate change.

OCCUPATIONAL HEALTH AND SAFETY

Climate change has substantial ramifications for workplace health and safety, including:

- Increased risk from extreme heat;
- Smoke from bushfires, which in the fires of 2019-2020 affected indoor workplaces as well as outside; and
- Increased pressure on emergency service and health workers from more frequent and damaging natural disasters.

There is a risk that pressure on businesses from climate change and from the COVID-19 crisis will lead some businesses to take short-cuts on safety or pressure workers to take greater risks. Heightened

vigilance from unions and regulators will be necessary.

VTHC and a number of unions have already developed comprehensive policies on heat and smoke, but these need to be consolidated, circulated widely, and included in enterprise agreements.

Further lobbying work needs to be conducted with the Victorian Government to improve guidance and policies around worker exposure to heat and smoke. VTHC will work with unions to coordinate this lobbying and provide assistance to unions around appropriate enterprise agreement clauses and provide guidance to unions around the OHS issues related to climate change and COVID-19 recovery.

COMMUNITY AND POLITICAL CAMPAIGNING

VTHC has worked with unions to develop an extensive and effective community and political organising infrastructure that will be important to winning struggles around climate change.

We Are Union local groups have already shown interest in organising around climate change and can be involved in the circulation of this document and putting it into effect.

The Young Workers Centre is vital to the organisation of the Young Unionists Climate Action Network (YUCAN), which provides opportunities for young workers to campaign on climate change, coordinates actions, and offers assistance to young unionists to raise the profile of climate action within official union structures.

SUPERANNUATION

With unions playing a leading role in the establishment and management of super funds, there is an opportunity and a responsibility for unions to ensure that funds use their investments to facilitate the shift to a sustainable economy, and that just transition is central to investment decisions.

Institutional investors like superannuation and pension funds are now devoting attention to the issue of just transition.

The Principles for Responsible Investment is the leading responsible investment organisation and has produced several reports on the importance of just transition to investment decisions⁶⁵ including a guide for investor action.⁶⁶ Importantly, like many organisations, it is advocating strongly for a COVID-19 response geared towards dealing with the climate emergency.⁶⁷

Australian super funds are increasingly reporting on their climate change risk, and taking action to reduce it, an example being VicSuper.⁶⁸

It is important for unions to push for the integration of climate change issues, as well as labour rights and just transition, into super fund Environmental, Social and Governance (ESG) frameworks. Increasing member concern about climate change demands greater accountability from super funds on the carbon intensity of their investments, and on what members' money is being spent on. The economics of energy generation are working against the fossil fuel industry, and it is now accepted that climate risk is not merely to be relegated to a marginal concern of environmentally aware members, but is a core element of financial risk, including stranded asset risk.

ALLIANCES AND PARTNERS

VTHC has good connections with the environment movement, social justice organisations, local government, universities, and government agencies. Victorian unions believe that for the most part, the climate/environment movement and the union movement, while sometimes having disagreements, are fundamentally united by a shared interest in opposing those interests that would exploit both the natural world and workers. All too often, the big corporate interests and their political proxies that

are plunging us all headlong towards climate disaster are the same forces that are trying to destroy unions and reduce worker rights.

VTHC is keen to work with organisations that share our goals and our values: putting people and workers at the centre of the transition to a just and sustainable economy, and stopping the destruction of our natural world, and the human communities that depend on it.

GLOBAL SOLIDARITY

Victoria and Australia, in contrast to many other countries, have managed the COVID-19 crisis relatively well.

The tyranny of distance has been a blessing this time, but climate change means no country is an island. If COVID-19 shows the importance of solidarity and collective action, climate change demands that at an international scale.

We must expect and demand that other countries do their bit to reduce greenhouse gas pollution, but

we can only do that if we do our bit too.

As one of the richest countries in the world, we have a responsibility to provide assistance and solidarity to countries with fewer resources, especially those in our immediate Asia-Pacific region.

We must work closely with unions in our region to ensure that workers' rights and interests are at the centre of climate change action everywhere and support the creation of an international movement of workers' solidarity across borders.

UPGRADING UNION FACILITIES ACROSS VICTORIA

There is also much that unions could do to improve our own environmental performance, which would create work and jobs for our members. Undertaken together, this would additionally create opportunities to increase our collective bargaining power to negotiate better returns. A number of unions have already built world-class net-zero facilities for their members, but more is possible. These opportunities include:

- Undertaking energy audits of our buildings, and then undertaking energy efficiency upgrades; coupled with educational and behavioural change processes in workplaces to reduce energy use and waste;
- Focusing on energy efficiency in renovations or new buildings, for example, the ANMF Elizabeth St building;
- Purchasing green power, or, better still, investing in renewable energy either through putting solar panels on our buildings (for example, as the AEU has done) or investing in generation capacity or entering power purchase agreements with

community energy generators, such as Ramyuck Aboriginal Cooperative in Gippsland, which is planning a solar farm and looking for offtake agreements. If unions pooled resources, we could do good deals on solar panels and power purchase agreements;

- Factoring in environmental impacts and labour standards in our purchasing decisions for merchandise, paper and other consumables;
- Purchasing fuel efficient, hybrid or electric vehicles;
- Providing bulk purchase opportunities for staff and members to acquire solar panels or solar hot water systems (Earthworker has already developed a model for this); and
- Supporting cooperatives and community organisations working towards a just transition and sustainable economy, including Cooperative Power (an electricity retailer owned by unions, including UWU, ASU, ANMF and community organisations) and Redgum, a 100% union cleaning cooperative (which the ASU uses).



UNION RIGHTS AND CLIMATE CHANGE ACTION

The slogan “climate change is union business” is as true now as ever it was. As this document argues, workers need to be at the centre of the decision making around the shift to a sustainable economy. For this to happen, union and worker rights have to be seen as necessary components of the effort to deal with climate change.

The massive growth of unemployment and the high level of income insecurity as a result of the COVID-19 crisis have exposed the failures of the neoliberal changes wrought in the labour market over several decades. “Flexible labour markets” have been the mantra of business and political elites, but we now see how deeply dysfunctional this is for workers and society. Insecure work means insecure income, no leave and few workplace protections. Insecurity also means that it is difficult to engage workers in just transition processes, since workers – rightly – feel that economic restructuring in Australia means high costs for workers, especially in terms of job losses, and that their voices are not going to be listened to in the shift to a low carbon economy. Even before COVID-19, the “flexible labour market” meant that the promised jobs in renewable energy were turning out to be largely short-term, low paid and sometimes performed by temporary overseas workers.

If workers, particularly in high emissions industries, are to be properly engaged in the shift to a low-carbon economy, they must be confident that their voices are listened to, that change will not mean reductions in the quality of their terms and conditions of work, or in the availability of jobs. There must be an acknowledgement from the political elite that the frequently celebrated modernisation of

the Australian economy from the 1980s fostered the world of precarious work through the abandonment of employees to ruthless market forces. There also needs to be a recognition of the victims as well as the successes of the “modernisation” of the economy since this time – the unskilled, the former industrial working class, regional cities. It is from these wellsprings that climate change denialism issues, from people who remember only too well what happened to them the last time a government decided the Australian economy needed to be restructured.

Though it may be surprising for some, one of the most important elements of the fight against climate change is our industrial relations framework. The scourge of insecure work and inadequate wages has developed because of the relentless attacks on unions over decades. Australia has now the most repressive anti-union laws in the OECD. Calls from the business lobby and their political representatives in parliament to introduce more “flexibility” – code for more power to bosses and more insecurity for workers – into the industrial relations system must be resisted for the sake of the transition to a sustainable economy.

Thus, the Australian union movement’s campaign to improve the industrial relations framework to allow unions to do their work, and to improve the terms and conditions of work for all Australian workers, must be seen as a vital component of any VTHC climate change and just transitions strategy. It must also be seen similarly by all organisations that are seriously committed to reducing the threat of climate change.

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