Victoria's next 30-year infrastructure strategy

Your details

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About you

Please tell us which best describes you:

☐ Victorian resident

☐ Victorian business owner/operator

☐ Industry professional

x☐ Community organisation representative

☐ Local government representative

☐ State government representative

☐ Researcher

☐ Other (please specify): Click or tap here to enter text.

Background:

Friends of the Earth Melbourne welcomes the opportunity to provide a submission to the Victorian Government's next 30-year infrastructure strategy. Friends of the Earth Melbourne (FoEM) is a member-based, not-for-profit organisation that has existed for over 50 years, and is part of FoE Australia and FoE International—the world's largest grassroots environmental network. Our work embodies the belief that social and environmental issues cannot be separated from each other. With this philosophy, FoE campaigns for climate

solutions that have both social and environmental justice at their core. We seek to work toward a sustainable and equitable future, and to operate in a way that empowers communities. This submission has been written by the Act on Climate collective in FoEM.

Act on Climate (AoC) is the climate justice collective of Friends of the Earth Melbourne. It is a grassroots group of activists organising for environmental and social justice with a state-based climate focus. Current campaigns run by the collective are supporting climate-impacted communities towards climate adaptation solutions in Victoria.

AoC is working together with communities facing urban and regional climate impacts, unions, and other stakeholders to build climate resilience. It advocates for stronger climate action from the Government to mitigate the climate crisis, as well as the Government taking the initiative to create the conditions needed for Victorian communities to withstand and be safe in the face of already occurring and rapidly approaching locked-in climate impacts.

AoC are pleased to see impacts of climate change being included in Victoria's next 30-year infrastructure strategy, but we believe that more could be included. For example the government should aim to create more community refuges and resilience centres and improve current community resilience infrastructure, as well as improving flooding and building planning policies. Climate adaptation needs to be a focus of every part of infrastructure planning and strategy because climate change will inevitably affect every part of our society.

When extreme weather events occur, hard infrastructure such as power, water and transport systems break down. Social infrastructure such as community and individual support services can be the determining factor between life and death.

Current Australian climate impact plans emphasise "social recovery" rather than "social preparation".[1] An extreme amount of funding is dedicated to recovery, while a minute amount is provided to build plans of preparation that prevent high amounts of damage to social infrastructure. Organising our systems to be proactive rather than reactive to disasters would open the potential for communities to have a sense of ownership over how responses to events unfold. Providing resources to communities to plan for how they can best ensure harm is minimised is not only a pathway to community health but also an efficient use of the state budget.

Australia does not have a national plan to develop its social infrastructure to provide shelter, support and community connection during extreme events and climate disasters. The Productivity Commission estimates we spend "97% of its disaster funding on mopping up and just 3% on getting ready".[2] In the 20 years to 2022, $24 billion was spent on disaster recovery and relief efforts (98% of disaster spending). Only $510 million was spent on resilience projects (2% of disaster spending). The Australian Prudential Regulatory Authority has warned Australia must invest $3.5 billion each year to limit the damage from increasingly frequent natural hazards, suggesting that simply responding to disasters after the fact is likely to cost 11 times more. Climate disasters are anticipated to cost Australia $73 billion

[1] https://johnmenadue.com/the-missing-link-in-australias-climate-change-adaptation-strategy-social-infrastructure
[2] https://johnmenadue.com/the-missing-link-in-australias-climate-change-adaptation-strategy-social-infrastructure/

annually by 2026, even if action to curb emissions is taken now. There are also very large indirect social costs, such as the impact on people's mental health.[3]

Climate disasters are already costing the government billions and escalating a range of social problems. The Victorian Government needs to spend money now to protect people later, as waiting to respond to these disasters will greatly increase the long-term monetary and societal costs. Funding adaptation in our infrastructure will reduce recovery costs, as well as ease pressure on our health system and economy from climate impacts. It will also assist in easing the insurability crisis in Australia - insurance is set to become increasingly unaffordable or unavailable in large parts of Australia.

Below are AoC's recommendations on how to better include climate adaptation in the various topics of the strategy.

Climate Change:

AoC applauds the Victorian Government's inclusion of climate change as a specific topic area in this strategy and the recommendations listed. Updating the climate adaptation action plan in 2026 to include infrastructure adaptation actions is welcomed. The government could improve Victoria's built infrastructure through:

- Buildings need to be designed, built and renovated for extreme heat. An assessment of heat impacts must be clearly outlined and understood before any building or infrastructure is approved. Relevant Government-regulated building standards for all new buildings (regarding efficiency, insulation, passive cooling, etc.) and heatwave safe rental standards are needed. Introducing insulation and cooling to the minimal rental standards would create safer homes and prevent heat-related illness and death.
- Look into how certain plants grown on agricultural land can be utilised to help mitigate fires. The comparative flammability of different plants could be used to design 'green firebreaks' where low-flammability native species could be planted around farms, houses, and communities. More research is needed and could be funded to explore these ideas in an Australian context[4].
- Create legislation, building zones and building requirements for high-risk location sites on the coast.
- Use groynes, artificial reefs, and other protective infrastructure that is suited to the particular site and conditions to prevent sea level rise and erosion.
- Provide education on and funding for community gardens and urban farms in urban design.
- Invest in water collection infrastructure, such as stormwater harvesting and rainwater harvesting.
- Incentivise and subsidise water tank instalments and guttering maintenance, both privately and on public buildings.
- Invest in upgrading and maintaining public water infrastructure, such as stormwater drains and water catchment areas.

[3] https://www.news.com.au/technology/environment/climate-change/adapt-or-die-nightmare-weather-coming-for-unprepared-australia/
[4] https://theconversation.com/fire-smart-farming-how-the-crops-we-plant-could-help-reduce-the-risk-of-wildfires-on-agricultural-landscapes-215703

- Incentivize and subsidize housing insulation, air filtration systems, and air purifiers.
- Create community centres for refuge in extreme weather events.
- Fund urban greening and active transport infrastructure.

To better adapt to floods and regarding building in flood zone the government should include the following in their infrastructure strategy:

- Make guidelines for who is responsible for flood mapping and planning and make this transparent to the public so people know who is in charge and where is at risk of flooding.
- Building location risk assessments - identify locations most at risk of flooding and modify planning to prevent development in these areas.
- Provide community education and resources to prepare residents in flood zones and support vulnerable community members.
- River communities need to be part of state-wide solutions to emergency weather events like flooding.

Cities:

In order to make our cities more resilient to climate change, there are many things that the government can include in the infrastructure strategy. To reduce the heat island effect, plant numerous native trees of a diverse variety for more shade canopy in cities, suburbs, and towns. Recent research indicates that we need 30% to 40% tree coverage to fully negate the heat-island impacts of asphalt and concrete[5]. 'De-paving' reduces heat from asphalt and concrete. We also heard from the Frankston and other communities the need for value being placed on mature trees as key assets, both as habitat and shade. They must be retained, and their health monitored, in conjunction with new plantings. Victorians also need more frequent, air-conditioned public transport with properly shaded stops and stations, which must be incorporated into city planning.

Community infrastructure:

Community infrastructure can save lives during climate impacts. The Victorian government should invest in more community infrastructure that can be places of refuge during climate impacts. These should have renewable energy power sources such as solar batteries, to mitigate climate change and also to be adaptive if the power is out because of a climate impact. Community centres should be effectively insulated and have the ability to be used as refuges during climate impacts such as storms or heatwaves. The government should invest more into neighbourhood houses and other forms of community infrastructure that already exist, so they can better support the community during climate impacts. Air-conditioned facilities can be utilised for heat relief. These public spaces that are already available for and used by the community to keep cool, need to be made functional as heat refuges and available outside of office hours during heatwaves. Community heatwave shelters that are able to accommodate people staying overnight in extreme conditions are also needed. A means for people to reach these spaces safely and return home safely, day or night, needs to be provided. The homeless need consideration here as well.

[5] https://pursuit.unimelb.edu.au/articles/these-maps-tell-us-we-need-to-cool-our-sweltering-streets

Energy:

AoC welcomes the government's inclusion of investing in more community batteries and transitioning away from gas. The Victorian government has already made inroads through its successful Energy Resilience Solutions (ERS) program, a 7.5 million fund that rolled out 24 energy resilience hubs throughout the state. This program is similar to community group Voices of the Valley's concept of 'Smart Resilience Centres', which proposes improving the resilience of community assets such as community centres or football and netball club facilities next to ovals, which often act as critical places of support during disasters Victoria can build on this success by continuing and expanded the ERS program throughout the state so more communities are able to benefit and improve their resilience. This program could also be harmonised with other key recommendations such as Local Energy Hubs, which focus on providing information for communities on how to advocat for and install sustainable and alternative sources of energy..

Housing:

More can be included in the infrastructure strategy to make housing more resilient to climate impacts. The Victorian Government can protect households from rising costs and climate impacts in addition to mitigating climate change by insulating houses to reduce energy use and the impacts of extreme heat. Retrofitting housing and building climate safe housing to withstand climate disasters will reduce the costs of homeowners having to repair and rebuild these homes. The government has already acted in this space (for instance announcing discounts on ceiling insulamon through the Victorian Energy Upgrades (VEU) program).

The current Victorian planning system does not address the need to incorporate climate change impacts and the mitigation of risks. To reduce the barriers to adaptation, explicit, mandatory, and enforceable climate change commitments need to be introduced into the planning system. All new homes and infrastructure being built should be built to withstand the climate impacts and disasters likely to occur in that region. The Victorian Planning Scheme does not include adequate provisions to allow statutory planners to require climate adaptation in new developments. This results in developments which create significant local climate risks (e.g., urban flash flooding and urban heat islands), and expose residents to climate impacts (e.g., through the construction of thermally unsafe housing).
There needs to be a ban on developments in areas deemed unsafe to build due to climate impacts such as flooding. 'Building back better' after disasters must also be ensured.
It must be mandated that all rental properties, social housing dwellings and low-income households must be insulated and retrofitted to be safe for occupants. This will reduce cost of living, as well as reducing impacts on people's health. An emphasis is needed on insulation and passive cooling (and heating) to improve thermal comfort and safety, reduce energy consumption, cost and greenhouse gas emissions.

Water:

The government can improve Victoria's water infrastructure resiliency through various ways including updating flood plans as mentioned before, providing guidance around whose responsibility it is and transparency to the public. The government can also provide better stormwater management through capture in underground storage, filtration, and permeable surfaces and spongy natural infrastructure, such as urban wetlands, rain gardens, and vegetation, to absorb water.[6] Another recommendation is to transform parks into stormwater basins through the creation of water storage capacity, such as Enghaveparken (Meadow Park) in Copenhagen, where water is stored above ground in a multifunctional reservoir that functions as a sports court with stepped seating in dry weather.[7] The government should provide Improved technology and communication for warning systems, such as designated flood wardens for improved warning of quickly rising water. Maribyrnong used to have a system whereby residents were appointed as flood wardens that historically work well. They were briefed by the council of imminent dangers and then they relayed this to other residents.[8] Increasing education around flooding, supporting communities experiencing floods and building back better are key ways to improve Victoria's infrastructure resiliency.

Transport:

Public transport is a key part of resilience to climate change. Many Victorians who can't escape the heat at home use the public transport system as heat relief. The Victorian government needs to invest in more frequent, air-conditioned public transport with properly shaded stops and stations. Improving the transport system means less people will rely on cars. To make public transport more accessible the government needs to put disability accessibility at the heart of all transport infrastructure, upgrade tram lines and continue the rollout of modernised E-class trams.

The bus network greatly needs improvement. For many suburbs across Melbourne, trams and trains are not easily accessible and do not provide transport to local activity centres. Improvement in bus services making them more direct, frequent and reliable could provide millions of Melbournians with adequate sustainable, safe and affordable transport choices. We also recommend upgrading the bus network by increasing bus services along major and popular transport routes with 'turn up and go' frequencies, as well as identifying and servicing hubs where there are no alternative public transport options. This will unlock potential for people to easily get to work or study, and participate in and contribute more to society without cars. Bus stops should be converted to high quality, accessible, and comfortable bus shelters. The State Government should start with reforming the bus network in the Western suburbs of Melbourne, including some of the country's fastest growing local government areas. The government can stimulate the manufacturing of electric buses to revamp local manufacturing jobs. We also recommend boosting funds to construct and maintain walking and cycling paths, and immediately fund all bike paths with development approval.

Resilience is also about mitigation, so the government should prioritise and put in place systems to facilitate rail freight, to reduce toxic emissions from trucks currently transporting

[6] https://www.vox.com/videos/23932182/urban-design-sponge-cities-climate-biodiversity
[7] https://www.melbournefoe.org.au/what_community_climate_adaptation_fund_achieve
[8] https://www.theage.com.au/politics/victoria/the-maribyrnong-river-flood-warnings-that-receded-thenwent-unheeded-20230928-p5e8ft.html

freight. As well as powering all new transport infrastructure -- trains, trams, buses, and electric vehicle charging stations -- with renewable energy to lock-in emissions reductions and create regional jobs.

For further comment on this submission please contact:

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