

Report to the Future Melbourne (Environment) Committee

Agenda item 6.5

City of Melbourne's response to the Climate and Biodiversity Emergency Declaration

18 February 2020

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Purpose and background

1. The purpose of this report is to seek Future Melbourne Committee's (FMC) endorsement of management's response to the Climate and Biodiversity Emergency Declaration (the Declaration) made on 16 July 2019.
2. Management's response is based on a review of how current and planned climate change actions align with the current global consensus of how cities should be responding to climate and biodiversity crises. Actions reviewed include those to mitigate climate change, ensure our city is resilient and adapted to the effects of climate change, and investment in restoration and conservation of biodiversity.
3. The City of Melbourne has been recognised as a leader in climate change action over many years. We are guided by nine strategies and plans which provide a comprehensive list of climate change action.
4. The City of Melbourne has joined 1348 governments across 26 countries, mainly local governments, in making the Declaration. It is still an evolving concept with no agreed global consensus or definition of how cities should respond.
5. Management has analysed responses from social movements, cities, climate scientists and global institutions. The proposed response is based on common principles that are emerging to guide action:
 - 5.1. Transparency and accountability – communicating the scale of crisis and effort required clearly.
 - 5.2. Rapid and ambitious action – accelerating the transition from fossil fuels (coal, oil and gas). Currently 94 per cent of municipal emissions come from fossil fuels sources.
 - 5.3. Social justice and inclusion – ensuring there is a plan to support workers, communities and industries throughout the transition.

Key issues

6. Using these principles to prioritise, management has reviewed the current and planned climate change related actions in Council endorsed strategies and plans and is recommending ten priority areas for accelerated action, subject to future annual plan and budget processes. These priority areas, detailed further in City of Melbourne's Response to the Climate and Biodiversity Emergency (Attachment 2) are:
 - 6.1. Transition Council operations from fossil fuels.
 - 6.2. Fast track delivery of 44 km of protected bike lanes outlined in the Transport Strategy 2030.
 - 6.3. Stimulate end market circular economy solutions.
 - 6.4. Embed climate change and biodiversity action into Council processes, programs and design and construction of assets.
 - 6.5. Mandate greening and zero emissions buildings through the Planning Scheme.
 - 6.6. Accelerate renewable energy purchasing by businesses and residents.
 - 6.7. Incentivise good building environmental performance (including renewable energy use) through rates.
 - 6.8. Build a business coalition to advance the clean and circular economy.
 - 6.9. Tell Melbourne's climate change and biodiversity story.
 - 6.10. Undertake bold advocacy on behalf of our community.
7. The Climate and Biodiversity Response supports an accelerated pathway to zero emissions by 2040 for the municipality, in particular through advocacy to State and Federal Government. This is consistent with the Climate Change Mitigation Strategy, which commits to an emissions reduction target aligned with best available science to stay below a 1.5 degrees temperature rise. Since the Climate Change Mitigation Strategy was prepared, the Intergovernmental Panel on Climate Change indicates stronger emissions reduction pathways are required.

Recommendation from management

8. That the Future Melbourne Committee endorses management's review and response to the Climate and Biodiversity Emergency, and the acceleration of the ten priority actions, subject to future annual plan and budget processes.

Attachments:

1. Supporting Attachment (Page 3 of 14)
2. Responding to Climate and Biodiversity Emergency (Page 4 of 14)

Supporting Attachment

Legal

1. There are no legal implications of this report.

Finance

2. Implementation of the recommendation is subject to future annual plan and budget processes.

Conflict of interest

3. No member of Council staff, or other person engaged under a contract, involved in advising on or preparing this report has declared a direct or indirect interest in relation to the matter of the report.

Health and Safety

4. In developing this proposal, the Health and Safety issues or opportunities have been identified to limit the impact of extreme heat and weather events on the communities within the city of Melbourne.

Stakeholder consultation

5. No consultation is proposed or has been undertaken for this report. All actions are included in existing City of Melbourne endorsed strategies and plans, which have undergone extensive stakeholder engagement processes during their development.
6. To develop City of Melbourne's response, management has consulted with other local and global cities on their response to the climate emergency.

Relation to Council policy

7. The recommendation is consistent with the following endorsed Council strategies and plans:
 - 7.1 Climate Change Mitigation Strategy.
 - 7.2 Climate Change Adaptation Strategy Refresh.
 - 7.3 Emissions Reduction Plan.
 - 7.4 Green Our City Strategy Action Plan.
 - 7.5 Municipal Integrated Water Management Plan.
 - 7.6 Nature in the City.
 - 7.7 Transport Strategy.
 - 7.8 Waste and Resource Recovery Strategy; and
 - 7.9 Urban Forest Strategy.

Environmental sustainability

8. The recommendation highlights Council's commitments to environmental sustainability, as outlined in the above endorsed strategies.



Responding to the Climate and Biodiversity Emergency

18 February 2020

Responding to the Climate and Biodiversity Emergency

Climate and Biodiversity Emergency Declaration

The City of Melbourne declared a Climate and Biodiversity Emergency (the Declaration) on 16 July 2019. The Declaration recognises that climate change and mass species extinction pose serious risks to the people of Melbourne and Australia, and should be treated as an emergency.

In declaring a climate emergency we have joined 1348 governments across 26 countries, mainly local governments. The City of Melbourne is part of a local and international movement recognising that we are in a climate emergency that requires urgent action to reduce emissions and to address climate change impacts.

The climate and biodiversity emergency acknowledges temperature rise above 1.5°C will lead to major and irreversible damage to ecosystems, with the UN estimating the need to immediately increase efforts between three to five times to contain climate change to the levels dictated by science.

If temperatures rise above 1.5°C then the wellbeing of current and future generations are at risk. Life-support systems providing food, pollination and clean water will collapse, with up to a million species facing extinction in the world's sixth mass die-off.

We are already responding

The City of Melbourne has been recognised as a leader in climate change action over many years. In 2003, we set an ambitious target of zero net emissions for the municipality of Melbourne. We have a strong record of reducing emissions, restoring and conserving biodiversity, and preparing our community for the impacts of climate change.

We need to do more

We realise the climate emergency we are facing requires even more urgent action. To support our climate and biodiversity emergency declaration, we have identified priorities where we can make the most impact.

Significantly, this means accelerating reaching our goal of zero emissions earlier, by 2040.

This document commits the City of Melbourne to accelerated action in ten priority areas to make most impact on climate change and biodiversity loss.

We need others to do more too

Australia is still the largest emitter of greenhouse gas emissions per capita in the developed world. Recent data shows our emissions have increased nationally over the last four years. This is hurting our economy, our environment and our health.

We need to take urgent action, together with the Victorian and Australian Governments, to strengthen an international effort to limit global warming to 1.5°C and avoid the worst impacts of climate change.

The City of Melbourne calls upon the Victorian and Australian Governments to declare a climate and biodiversity emergency and to commit to a 1.5°C science-based target in line with the Paris Climate Agreement.

Climate change impacts

Melbourne is already dealing with a hotter climate, and our climate in Victoria has already warmed by 1°C. Our city currently averages 11 days greater than 35 degrees. By 2050 we will experience an average 16 days greater than 35 degrees.

Victoria has had longer fire seasons since the mid-1990s and fire days are projected to increase by 42 per cent per year in Melbourne by 2050. The risk of fires is being compounded by worsening droughts. In 2019 Melbourne had 374 mm rainfall, down 40 per cent on our 630 mm average. Less rain is falling during spring in Melbourne, meaning more severe conditions in the lead up to the summer bushfire season. By 2050, there will be 20 per cent less spring rainfall.

We are also facing far more severe rainfall events, flooding and storm surge. The 2016 thunderstorm asthma events in Melbourne resulted in serious health impacts for thousands and some fatalities. By 2050 sea levels will rise by 24 cm on 1990s levels (Clarke, et al., 2019).

The deadly bushfires of 2019-2020 across Australia destroyed an estimated 7.7 million hectares (Guardian Australia, 2020), damaging thousands of homes and properties and killing at least 34 people. An estimated one billion animals have been killed (Dickman, 2020), and many more bats and insects are likely to die as a result of lost habitat and food sources. Smoke from the bushfires caused severe health impacts for residents across Victoria. In January 2020 Melbourne's air quality was the worst in the world due to smoke from bushfires (Victorian Chief Health Officer, 2020).

Temperature increases mean we could lose 35 per cent of the city's trees in the next 20 years (Kendal & Baumann, 2016). Elms and some species of indigenous eucalypts won't survive. Melbourne is home to many threatened species including the powerful owl, grey-headed flying fox and the swift parrot.

Climate change will cost our local economy \$12.6 billion by 2050 (City of Melbourne, 2018), impacting agriculture, tourism, insurance and finance. The estimated cost of smoke haze in Melbourne, Sydney and Canberra from the 2019–2020 bushfires is \$500 million (ABC News, 2020). Businesses in the municipality of Melbourne lost an estimated \$37 million in revenue over the four-day heatwave in 2014 (Sweeney Research, 2014), while the total cost of the 2009 Black Saturday bushfires was estimated at \$4.4 billion (2009 Victorian Bushfires Royal Commission, 2010).

Melbourne's current emissions

The municipality of Melbourne is 37.7 square kilometres and includes the central business district and inner suburbs. The majority of the municipality's emissions are due to energy use in commercial buildings and transport.

In 2017, our emissions were 4,678,194 tonnes carbon dioxide equivalent (tCO₂-e), or 31 tonnes per person – one of the highest in the world on a per capita basis. This is because we have a low residential population of around 153,000 and a large population of daily commuters who work in central business district office buildings. These buildings are primarily powered by electricity generated from high emitting brown coal-fired power stations.

Nearly three quarters of Melbourne's emissions come from the electricity generation sector (72 per cent of emissions in 2016). In total, 94 per cent of emissions are from fossil fuel sources.

There are many activities in the municipality that we have not traditionally had direct responsibility for such as transport, energy supply, and energy use in privately owned buildings. Using international standards, the emissions from these sources are still measured in the municipality's greenhouse gas accounts.

City of Melbourne cannot mitigate climate risk for the municipality effectively without stronger action from the Victorian and Australian Governments to reduce greenhouse gas emissions. Unlike some cities in other countries, we do not have the power to regulate building energy performance standards, and we do not currently operate public transport or energy utilities. There are also some limitations to City of Melbourne's urban planning controls. Without urgent policy changes by the Victorian and Australian Governments, the municipality's emissions reduction targets cannot be met.

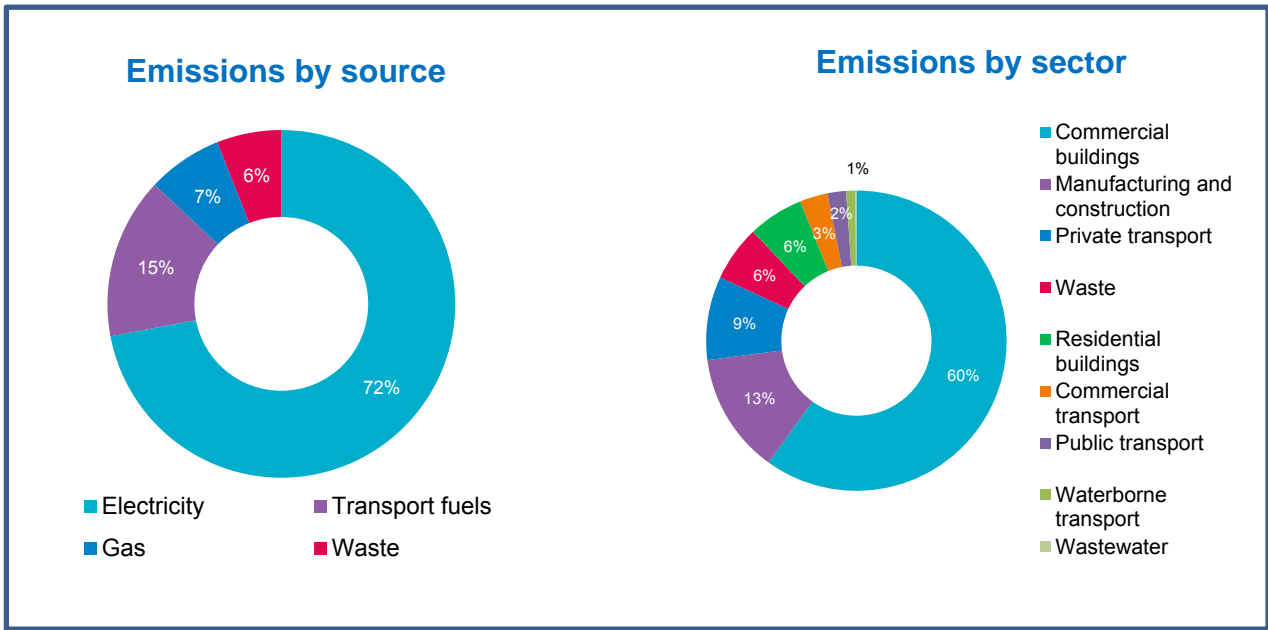


Figure 1: Carbon dioxide equivalent emissions by source and sector (2017)

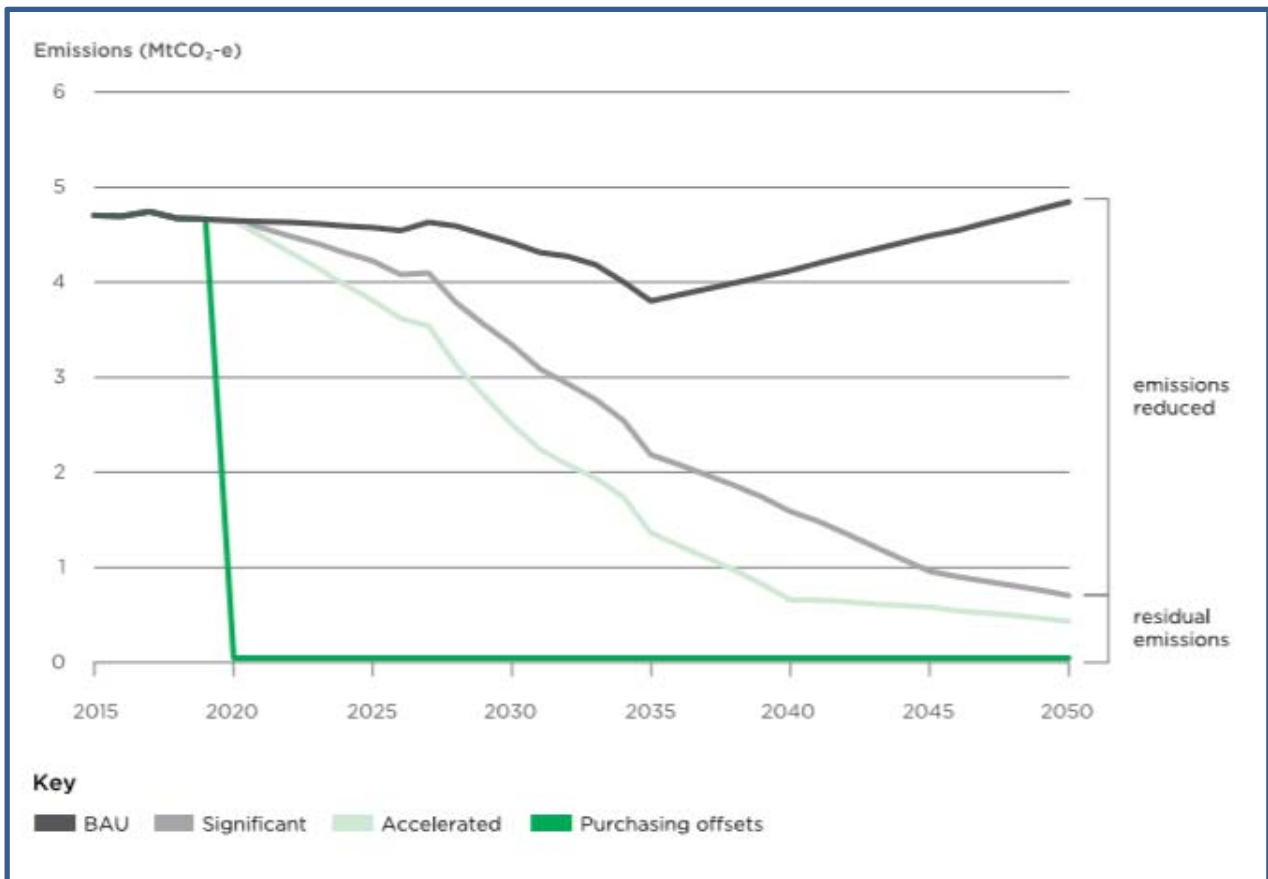


Figure 2: Emission reduction scenarios from the Climate Change Mitigation Strategy 2018

What we are doing

Reducing our emissions and adapting the city to climate change

The City of Melbourne is leading by example on climate and biodiversity, guided by nine strategies and plans which have a comprehensive list of climate change action. We are reducing our emissions and adapting the city by investing in renewable energy, ecosystem based urban forests, green buildings, waste innovation and better pedestrian and cycling infrastructure.

We have taken strong action to reduce emissions from our own operations and to power our buildings with 100 percent renewable electricity. This electricity is purchased through the Melbourne Renewable Energy Project which enabled the construction of a new renewable energy development – a 39 turbine windfarm at Crowlands in regional Victoria. In 2016, we introduced a 1.5°C science-based target for our operations in our Emission Reduction Plan 2016–2021. However, our operations generate less than one per cent of emissions in the municipality.

In 2015, Council decided not to invest in fossil fuel or fossil-fuel aligned companies and called upon our default superannuation fund to create a fossil fuel free investment option.

Highlights of our direct work include:

- being certified carbon neutral for our operations every year since 2012
- cutting emissions from our operations by 53 per cent between 2013 and 2019
- purchasing 100 per cent renewable energy through the Melbourne Renewable Energy Project
- maintaining carbon neutrality for major public events including Melbourne Fashion Week, Melbourne Music Week and Melbourne Knowledge Week
- planting 3000 trees a year to grow our urban forest, with over 22,000 trees planted since 2012
- investing \$40 million in stormwater harvesting and water sensitive design, capturing and reusing around 180,000 kilolitres of water per year
- \$17.1 million of Clean Energy Finance Corporation funds invested in energy efficiency and renewable energy, including 2244 solar panels installed and 11,816 street lights
- increasing biodiversity with 16,000 m² of new understorey vegetation planted in Melbourne since 2018
- greening the city and increasing permeability by over 3500 m² through park expansion and streetscapes projects – Lincoln Square, University Square, Gardiner Reserve, Clayton Reserve, Latrobe and Exhibition Streets, Barry and Leicester Streets
- accelerating waste avoidance and resource recovery through centralised garbage and recycling hubs across the central city.

Influencing businesses and residents to take action

We also have a strong track record of working in partnership with the community and businesses. Our strategies include actions that influence businesses and the community to take climate-related action.

Highlights of our partnership work include:

- Managing the Melbourne Renewable Energy Project with some of Melbourne's leading businesses, universities, local governments and public institutions, to develop Australia's first group Power Purchase Agreement.
- Running the CitySwitch program, helping commercial office tenants to reduce their environmental footprint. Total energy savings from CitySwitch signatories in the municipality of Melbourne from 2015-2018 was 54,479 MWh. This represents an emissions saving of 60,471 tonnes CO₂-e and a cost saving from avoided energy consumption of approximately \$12.5 million.
- Greening in the city's private realm through Urban Forest Fund, with 5773 m² of greening funded in 2017-18, worth \$4.9 million.
- Developing and maintaining the Exceptional Tree Register to protect exceptional trees that exist on privately owned or managed land in our city.

- Creating refuge, a five-year project exploring the health impacts of climate change and how the community can prepare and respond
- Facilitating Environmental Upgrade Agreements to provide building owners or managers with access to loans to upgrade a commercial building to maximise the building's energy efficiency.

Accelerating our response

We have achieved a lot but much more is needed, at a faster pace, to prevent irreversible damage to our city, people, plants and animals and economy. We need to increase our ambition and accelerate action to reduce Melbourne's dependence on coal, oil and gas. Currently 94 per cent of the municipal's emissions come from these fossil fuels sources.

The City of Melbourne has analysed responses from social movements, cities, climate scientists and global institutions. Our response is based on common principles that are emerging to guide action:








1. Transparency and accountability – communicating the scale of crisis and effort required clearly.
2. Rapid and ambitious action – accelerating the transition from fossil fuels (coal, oil and gas).
3. Social justice and inclusion – ensuring there is a plan to support workers, communities and industries throughout the transition.












































To support our climate and biodiversity emergency declaration, the City of Melbourne has identified ten priorities for accelerated action based on the areas we can make the most impact.











Ten priorities for accelerated action



1. Transition Council operations from fossil fuels.
2. Fast track delivery of 44 km of protected bike lanes outlined in the Transport Strategy 2030.
3. Stimulate end market circular economy solutions.
4. Embed climate change and biodiversity action into Council processes, programs and design and construction of assets.
5. Mandate greening and zero emissions buildings through the Planning Scheme.
6. Accelerate renewable energy purchasing by businesses and residents.
7. Incentivise good building environmental performance (including renewable energy use) through rates.
8. Build a business coalition to advance the clean and circular economy.
9. Tell Melbourne's climate change story.
10. Undertake bold advocacy on behalf of our community.

The table below outlines our ten priorities for accelerated action in detail. It is based on the areas we can make the most impact. This includes taking leadership by fast tracking our own actions and influencing partners, the community and governments to act. The actions focus on reducing emissions from the sources and sectors generating the most emissions, protecting biodiversity and adapting to climate change.

Emissions reduction 	Biodiversity and Adaptation 	Leadership 	Influence 	Estimated cost impact  High  Medium  Low
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Priority	Detailed actions	Impact and benefits	Cost impact	Time frame
1	Transition Council operations from fossil fuels. Bring forward switching of top 10 Council buildings from gas to all electric by 2030.	 		2030
	Switch to electric infrastructure at end of life for all other buildings through updating asset management policy.	 		2040
	New buildings and redevelopments must be all electric. Immediate priorities: Kensington Community Recreation Centre and Queen Victoria Market.	  		2021
	Switch all fleet vehicles to electric at point of purchase or lease through updating Vehicle Fleet Policy.	 		2025
2	Fast track delivery of 44 km of protected bike lanes outlined in the Transport Strategy 2030. Accelerate the delivery of 44 km of protected bike lanes to give more people the option to leave the car at home. Deliver these lanes endorsed as part of the Transport Strategy 2030 in four years rather than 10, using lower cost materials.	   		2025
3	Stimulate end market circular economy solutions. Accelerate changes to purchasing practicing to use recycled materials.	  		Ongoing
	Investigate opportunities to partner with others to stimulate end market circular economy solutions.	  		2021
4	Embed climate change and biodiversity action into Council processes, programs and design and construction of assets. Prioritise emissions reduction in open space management and maintenance, street cleaning, waste and recycling collection, coin collection, vehicle towing and graffiti removal and security service contracts. Actions to include switching fleet, street cleaning sweepers and maintenance equipment to electric and trucks to renewable fuel source.	  		Ongoing
	Identify the main industries contributing to biodiversity loss through purchasing and work with suppliers to change practices.	  		2021
	Increase number of carbon neutral major events from three to six and maintain annually, expanding to Moomba, New Year's Eve and Firelight Festival.	   		2021
	Embed climate-related financial disclosure in annual reporting process, relating to governance, strategy and risk management. <i>(Using Financial Stability Board's Task Force on Climate-related Financial Disclosures framework)</i>	  		2022

Priority	Detailed actions	Impact and benefits	Cost impact	Time frame
	Consider how the Sustainable Development Goals can inform business planning, resource allocation, performance reporting and benchmarking.		●	2021
	Develop municipal-wide design and construction standards to future proof our streets and buildings for efficiency, permeability, greening, walking and cycling.		●	2022
	Update capital works process to include: <ul style="list-style-type: none"> Environmental impact of each project is assessed and used to inform and prioritise projects. Climate change criteria included in weighting. 		●	2022
	Accelerate tree canopy growth through improving growing environment in CBD and Southbank.		●●	2020-2025
5	Mandate greening and zero emissions buildings through the Planning Scheme.		●	2022
6	Accelerate renewable energy purchasing by businesses and residents.		●	2021
	Develop new purchasing model for small energy users (small and medium-sized enterprises, strata, residents).		●	2021
7	Incentivise good building environmental performance (including renewable energy use) through rates.		●	2021
8	Build a business coalition to advance the clean and circular economy.		●	2020
9	Tell Melbourne's climate change and biodiversity story.		●	Ongoing
	Develop climate change and biodiversity story for our city, including: <ul style="list-style-type: none"> The current and future impacts on the community, ecosystems, infrastructure and economy. The City of Melbourne's response and what others need to do too. 			

Priority	Detailed actions	Impact and benefits	Cost impact	Time frame
10	<p>Undertake bold advocacy on behalf of our community.</p> <p>Advocacy is a key priority for emergency action, as the Victorian and Australian Government have direct control over policy that will reduce emissions.</p> <p>The Victorian Government needs to:</p> <ul style="list-style-type: none"> • Commit to 65-75 per cent interim emissions reduction target by 2030 (in line with 1.5°C science-based target) • Deliver 100 per cent renewable energy by 2030. • Deliver gas free, climate ready buildings and precincts through the Victorian Planning System. • Invest in a zero emissions, fast, frequent public transport. • Create a circular economy, designing out waste and reusing materials extend their lifespan. <p>The Australian Government needs to:</p> <ul style="list-style-type: none"> • Increase funding for health and emergency services, habitat restoration and infrastructure to respond to heatwaves, droughts, bushfires and floods. • Aligned to the best available science, increase Australian targets under the Paris Climate Agreement, introduce climate change legislation with a zero net target and avoid double counting. • Support investment in biodiversity and resilience, carbon farming and other natural climate solutions by agreeing the Paris Climate Agreement rules for Article 6 to avoid double counting. • Fast track strong changes to National Construction Code to enable the transition to zero net emissions buildings. • Create a circular economy by extending the responsibility of producers to design out waste and reuse materials. 			Ongoing

Action needed by Victorian and Australian Governments

Cities cannot do it alone, and we are advocating for urgent policy changes by the Victorian and Australian Governments.

The City of Melbourne calls upon the Victorian and Australian Governments to declare a climate and biodiversity emergency and to commit to a 1.5°C science-based target in line with the Paris Climate Agreement.

The Victorian Government needs to:

1. Commit to a 65-75 per cent interim emissions reduction target by 2030 (in line with 1.5°C science-based target).
2. Deliver 100 per cent renewable energy by 2030 and commit to develop a pipeline of actions to meet the target:
 - Purchase 100 per cent renewable energy for its operations, including Metro Trains.
 - Establish a rolling renewable energy program through reverse auctions.
 - Directly invest in or accelerate upgrades to the transmission network.
 - Prepare affected communities and industries for the rapid transition away from fossil fuels.
3. Deliver gas free, climate ready buildings and precincts through the Victorian Planning System.
 - Introduce state wide planning provision for environmentally sustainable design.
 - Mandate all electric, climate ready new buildings.
 - Commit to no new gas infrastructure in urban renewal areas.
 - Advocate for strong changes to National Construction Code through COAG Energy Council and Building Ministers Forum.
4. Invest in a zero emissions, fast, frequent public transport.
 - Purchase 100 per cent renewable energy for Metro Trains.
 - Deliver Metro Melbourne 2.
 - Electrify Melbourne's bus fleet.
 - Extend trams and buses into urban renewal areas.
5. Create a circular economy, designing out waste, and reusing materials to extend their lifespan.
 - Introduce a container deposit scheme.
 - Invest landfill levy in resource recovery infrastructure.
 - Use government purchasing power to drive demand for recycled content.

The Australian Government needs to:

1. Aligned to the best available science, increase Australian targets under the Paris Climate Agreement, introduce climate change legislation with a net zero target and avoid double counting.
2. Increase funding for health and emergency services, habitat restoration and infrastructure to respond to heatwaves, droughts, bushfires and floods.
3. Support investment in biodiversity and resilience, carbon farming and other natural climate solutions by agreeing the Paris Climate Agreement rules for Article 6 to avoid double counting.
4. Fast track strong changes to National Construction Code to enable the transition to zero net emissions buildings.
5. Create a circular economy by extending the responsibility of producers to design out waste and reuse materials.

References

2009 Victorian Bushfires Royal Commission, 2010. *Final Report*, Melbourne, Victoria.

ABC News, 2020. *Ross Garnaut's climate change prediction is coming true and it's going to cost Australia billions, experts warn*. [Online]
Available at: <https://www.abc.net.au/news/2020-01-08/economic-bushfires-billions-ross-garnaut-climate-change/11848388>

City of Melbourne, 2018. *Climate Change Mitigation Strategy to 2050*.

Clarke, J. et al., 2019. *Greater Melbourne Climate Projections 2019*, Melbourne, Victoria: State of Victoria.

Dickman, C., 2020. *More than one billion animals killed in Australian bushfires*. [Online]
Available at: <https://sydney.edu.au/news-opinion/news/2020/01/08/australian-bushfires-more-than-one-billion-animals-impacted.html>

Guardian Australia, 2020. *How big are the fires burning in Australia? Interactive map*. [Online]
Available at: <https://www.theguardian.com/australia-news/datablog/ng-interactive/2019/dec/07/how-big-are-the-fires-burning-on-the-east-coast-of-australia-interactive-map>

Kendal, D. & Baumann, J., 2016. *The City of Melbourne's Future Urban Forest: Identifying vulnerability vulnerability to future temperatures*, Melbourne: Clean Air and Urban Landscapes Hub.

Sweeney Research, 2014. *2014 Heatwave Business Impacts - Social Research*, Prepared for the City of Melbourne.

Victorian Chief Health Officer, 2020. *Update from State Control Centre* [Interview] (14 January 2020).