Executive Summary

**1. Local action, global leadership**

The global role of cities in stepping up to act on climate change was recognised in the 2015 Paris Climate Agreement. Since that time, national and state governments, cities, investors, businesses and communities have begun to take action to reduce greenhouse gas emissions to help avoid a global average temperature rise of 1.5ºC.

In 2016, the City of Melbourne hosted the Future Melbourne deliberative democracy process to develop a community vision and set priorities for the city. Reducing greenhouse gas emissions from the municipality was identified as a top priority and this is reflected in our Council Plan 2017–2021. This view is shared across Victoria: 80 per cent of people are willing to act on climate change and 87 per cent think local government should be taking action.[[1]](#footnote-1)

We will deliver on our commitment to the science-based targets in the Paris Climate Agreement by working with others to reduce emissions from the municipality. We have also joined seven cities in a C40 Climate Action Planning Pilot Program: Boston, Durban, Los Angeles, London, Mexico City, New York, and Paris.

This strategy is a draft for public comment. We will consult widely with the community, to support community participation and the fair distribution of benefits.

**2. Raising our ambition**

In 2003, the City of Melbourne set an ambitious target of zero net emissions from the municipality by 2020. We were one of the first cities to set such an ambitious target and many other cities followed our lead. We are now part of a movement of cities around the world taking bold action for the benefit of our communities and for future generations.

To align with the Paris Climate Agreement, we need to set ambitious emission reduction targets for 2030,[[2]](#footnote-2)  achieve net zero emissions before 2050 and align our strategy to the C40 Climate Action Plan Framework.[[3]](#footnote-3)

The Australian Government has now ratified the Paris Climate Agreement and the Victorian Government has introduced the *Climate Change Act 2017.* This provides a fresh opportunity for the City of Melbourne to act on the emissions that cause climate change. This draft strategy identifies the actions that we can take to leverage systemic change.

For example, we want to pilot a virtual power plant powered by renewables in the city. We will expand the ground-breaking Melbourne Renewable Energy Project (MREP) to facilitate power purchase agreements for businesses across the city. This will generate investment in new renewable energy. We will also advocate for Victorian and Australian Government action to deliver 100 per cent renewable energy to our city and to increase the ambition of Australia’s climate policy.

The City of Melbourne will partner with industry and the Victorian and Australian Governments to demonstrate zero emissions for the Fishermans Bend and Arden precincts and remove barriers to zero emissions buildings. We will advocate for effective building standards to reduce emissions.

We will invest in better walking and cycling infrastructure and advocate for Melbourne’s public transport to be powered by 100 per cent renewable energy. We will apply a circular economy approach to reduce emissions from buildings and precincts.

And we will collaborate with community organisations, businesses, cities, and government agencies to reduce climate risk to fulfil our future responsibilities under the *Local Government Bill 2018*.

The Victorian *Climate Change Act 2017* provides a framework for local governments to make a voluntary Council Pledge to implement five-year Emission Reduction Plans for the municipality from 1 January 2021. This strategy will be supported by a rolling five-year implementation plan that will be our first Council Pledge under the *Victorian Climate Change Act 2017*.

**3. We need to take bold action together**

Aligning to the Paris Climate Change Agreement requires a mix of delivery mechanisms: engaging, facilitating, collaborating and partnering. We will lead the delivery of actions within our powers and advocate for policy change and action from others.

To inform the development of the Climate Change Mitigation Strategy to 2050 we analysed four scenarios:

1. business as usual (BAU)
2. offsetting all remaining emissions from 2020
3. a significant action program to reduce emissions
4. an accelerated action program.

Both the significant and accelerated action scenarios require investors, businesses and the Victorian and Australian Governments to also take action.

The chart below summarises the four scenarios. It illustrates the reduction in emissions needed as part of the international effort to stay below a 1.5ºC rise in global average temperatures.

Figure 1 Emissions reductions needed under each scenario

Emissions ( tCO2 -e)

The City of Melbourne’s preferred approach is to deliver the actions needed to achieve the **significant action scenario** and pursue actions for the accelerated action scenario where there is the opportunity to go further.

This will require us to take bold action within our powers, collaborate and advocate for policy change from the Victorian and Australian Governments. Our approach aligns with the Paris Climate Agreement while acknowledging our limited powers and financial resources.

Table 1 Economic costs and benefits of each scenario compared to business as usual

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** | **Target per person in 2030** | **Net Zero Emissions** | **Aligned to Paris Climate Agreement** | **Economic Estimate** |
| **Business as usual** | 22.1 tCO2-e | never | no | Cost to the municipality economy (burden) would be $12.6 billion from increased maintenance, healthcare, business failure etc from the impacts of climate change |
| **Purchasing offsets** | 22.1 tCO2-e | 2020 | no | Cost to the City of Melbourne of $30 million per year. increasing due to supply demand pressures. No reduction to municipality economic burden. |
| **Significant action** | 14.4 tCO2-e | 2050 | yes | Investment of $2.3 billion to implement, however reduces the municipality economic burden by $3.1 billion |
| **Accelerated action** | 10.2 tCO2-e | 2043 | yes | Investment of $2.9 billion to implement, however reduces the municipality economic burden (BAU) by $5.6 billion |

If we do not act decisively to reduce emissions as part of the global effort, the impacts of climate change and missed economic opportunities of transitioning to a low carbon economy will cost the community $12.6 billion from 2020 to 2050 (business as usual scenario). The second scenario requires purchasing offsets to meet the target of zero net emissions. This does not address the causes of greenhouse gas emissions and provides no return on investment to the Melbourne community. For the reasons above, scenarios 1 and 2 do not appear to be in the best interests of the community.

According to preliminary estimates, we will generate substantial social, economic and environmental benefits for the community by taking decisive action to reduce emissions. The preliminary estimate of the **net benefits** to the community is $3.1 billion for the significant action scenario and $5.6 billion for the accelerated action scenario when compared to business as usual over the 2020–2050 period. The benefits are generated by the reduced burden of climate impact on the economy if the science-based targets in the Paris Climate Agreement are achieved.

The emission reduction targets that the significant and accelerated action scenarios could achieve in 2025, 2030 and 2050 are presented in the tables below. Both scenarios align to the science-based targets of the Paris Climate Agreement.

Table 2 Proposed targets: significant action scenario

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Baseline** | **significant action scenario** | | |
| 2015 | 2025 | 2030 | 2050 |
| **Absolute emissions** | 4.7  MtCO2-e | 4.2  MtCO2-e | 3.4  MtCO2-e | 0.5  MtCO2-e |
| **% reduction on 2015** | 10% | 29% | 90% |
| **Per capita emissions** | 33.8  tCO2-e | 20.2  tCO2-e | 14.4  tCO2-e | 1.3  tCO2-e |

Table 3 Proposed targets: accelerated action scenario

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Baseline | accelerated action scenario | | |
| 2015 | 2025 | 2030 | 2050 |
| Absolute emissions | 4.7  MtCO2-e | 3.7  MtCO2-e | 2.4  MtCO2-e | 0.2  MtCO2-e |
| % reduction on 2015 | 21% | 50% | 94% |
| Per capita emissions | 33.8  tCO2-e | 17.7  tCO2-e | 10.2  tCO2-e | 0.7  tCO2-e |

**Strategic priorities and outcomes**

This draft strategy outlines four priorities the City of Melbourne will work towards:

1. 100 per cent renewable energy
2. zero emissions buildings and precincts
3. zero emissions transport
4. reducing the impact of waste.

To implement the strategy we will:

* integrate climate adaptation and mitigation
* deliver environmental, social and economic benefits to the community
* support innovation, knowledge sharing and transparency.

Our aim is to reduce the largest sources of emissions in the municipality to achieve science-based targets and align our strategy to the Paris Climate Change Agreement and C40 Climate Action Plan Framework.

The graphs on the following page show the potential contribution of actions that reduce emissions from energy supply, buildings, transport and waste in the significant and accelerated emission reduction scenarios.

Figure 2 Emissions reductions needed under each scenario

Significant action scenario

Accelerated action scenario

**Long-term thinking, short-term action**

This Climate Change Mitigation Strategy to 2050 is one in a suite of strategies delivering step-change for our community as part of our Council Plan 2017–2021. These include Climate Change Adaptation, Nature in the City, Transport, and Waste and Resource Recovery strategies.

The proposed timeframe is:

* 2020–2050 for this strategy with an interim target for 2030: aligned to the period of the Paris Climate Agreement
* 2020–2025 for the rolling implementation plan: aligned to the Council Pledge requirements of the *Climate Change Act 2017.*

We will measure and report our progress to the community annually and evaluate the implementation of the strategy by 2025.

Figure 3 Potential contribution of Australian and Victorian Government policies to Melbourne’s municipal emission reductions 2020–2050

Significant action scenario

Accelerated action scenario

As shown above, without policy changes in state and national jurisdictions, the City of Melbourne will not be able to achieve alignment to the Paris Climate Agreement targets. These targets can only be achieved through collaborative action across all three levels of government.

This strategy identifies opportunities within City of Melbourne’s control, together with opportunities outside of City of Melbourne’s control where the role of Council is to advocate and influence. For example, the City of Melbourne does not operate public transport and does not have the power to regulate energy performance standards in buildings, energy supply or renewable energy targets for the city. The graphs show the emission reductions that can be delivered by the City of Melbourne aligned with the Victorian and Commonwealth Governments if a 2030 renewable energy target was set and/or an ambitious national climate and energy policy was endorsed.

1. Sustainability Victoria Social Research on Climate Change 2016 [↑](#footnote-ref-1)
2. The calculation for 2030 needs to follows the C40 Deadline 2020 approach with contraction and convergence of emissions by 2030. This means our target needs to be no more than 14.6 tonnes CO2 equivalent per person by 2030. [↑](#footnote-ref-2)
3. The C40 Climate Action Planning Framework supports cities in developing climate action plans. It sets out the essential components of a climate action plan that is deemed to be compatible with the objectives of the Paris Agreement. [↑](#footnote-ref-3)