

C40 Net Zero Emissions Buildings and Advancing Towards Zero Waste Declarations

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Purpose and background

1. The purpose of this report is to seek endorsement for the C40 Cities Climate Leadership Group (C40) Zero Net Emissions Buildings Declaration and Advancing Zero Waste Declaration, as well as endorsement of the World Green Building Council's new 'Bringing Embodied Carbon Upfront' report.
2. These endorsements will enable C40, the World Green Building Council, City of Melbourne and other signatories to highlight our collective commitment to ambitious climate action and inspire others to take similar action, in particular state and national governments. C40 will be showcasing new city signatories in the lead up to and at the C40 Mayors Summit in October.

Key issues

3. The C40 and World Green Building Council Net Zero Carbon Buildings Declaration asks cities to pledge to enact regulations and/or planning policy to ensure new buildings operate at net zero carbon by 2030 and all buildings by 2050, working within the extent of their powers and authority. To date 23 cities, six states and regions and 23 businesses and organisations across the world have already committed to this declaration.
 - 3.1. This declaration is directly aligned with the Zero Emissions Buildings and Precincts strategic priority within the Climate Change Mitigation Strategy, in particular action 2.6: 'Renew and implement planning policies to support the development of zero emissions buildings and precincts'. The goal for existing buildings is aligned with several actions within this priority.
 - 3.2. Action is already underway to build the business case for changes to the planning scheme as part of the Green Our City Strategic Action Plan (action 4.1).
4. The C40 Advancing Towards Zero Waste Declaration asks cities to pledge to advance towards zero waste cities by reducing the municipal solid waste generation per capita, the amount of waste disposed to landfill, and increasing the diversion rate away from landfill to at least 70per cent by 2030. To date 25 cities and regions have already committed to this declaration.
 - 4.1. This declaration is directly aligned with the goals and actions within the Waste and Resource Recovery Strategy 2030.
5. To show how the City of Melbourne will meet the commitments of these declarations, action plans are required to be completed and submitted to C40. These will be based on actions already identified within existing Council strategies.
6. The World Green Building Council will release a new report, 'Bringing Embodied Carbon Upfront', during Climate Week in New York City on September 23. This report has been developed in partnership with the Children's Investment Fund Foundation and a broad range of industry stakeholders, which calls for urgent and coordinated action to tackle global embodied carbon emissions from the construction sector. The report is targeted at CEOs and policymakers.
 - 6.1. There is an opportunity for government leaders, industry networks and businesses to endorse the vision and ambition set out in this new report.
 - 6.2. The vision and pathways to action in the report align with existing circular economy and product stewardship commitments in the Climate Change Mitigation Strategy and Waste and Resource Recovery Strategy 2030. It is worth noting however that endorsing the vision of the report does not commit City of Melbourne to any specific targets mentioned in the report.
 - 6.3. The report is currently embargoed prior to public launch in New York City on 23 September 2019 as part of Climate Week.
7. There are no additional costs associated with these endorsements. All actions required to meet the commitments are included in existing City of Melbourne endorsed strategies and plans.

Recommendation from management

8. That the Future Melbourne Committee endorses the Net Zero Carbon Buildings Declaration, Advancing Zero Waste Declaration and the vision and ambition of the 'Bringing Embodied Carbon Upfront' report, and authorises the Director City Strategy and Place to complete and submit the C40 Action Plans.

Attachments:

1. Supporting Attachment (Page 3 of 7)
2. C40 Net Zero Emissions Buildings Declaration (Page 4 of 7)
3. C40 Advancing Towards Zero Waste Declaration (Page 6 of 7)

Supporting Attachment

Legal

1. There are no direct legal implications arising from the recommendation made in this report.

Finance

2. There are no financial implications of this recommendation. All actions are included in existing City of Melbourne endorsed strategies and plans.

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, no Occupational Health and Safety issues or opportunities have been identified.

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.

Relation to Council policy

6. This recommendation is consistent with the Climate Change Mitigation Strategy to 2050, Waste and Resource Recovery 2030 Strategy and Emissions Reduction Plan 2016–2021.

Environmental sustainability

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

Net Zero Carbon Buildings Declaration

Our buildings help define our cities – from our iconic skylines to our historic architecture. They are where our citizens, live, work, study and play. These buildings are also one of the biggest sources of greenhouse gas (GHG) emissions, [accounting for over half of total city emissions on average](#), and a significant source of air pollution. Currently, [half a million people die each year due to outdoor air pollution caused by energy used in buildings](#). Delivering on the goals of the Paris Agreement, which science tells us we must, requires urgent and dramatic action to cut emissions from buildings.

Net zero carbon buildings are green and healthy buildings. They use energy ultra-efficiently and are supplied by renewables. They are comfortable homes where money isn't wasted on energy bills, productive workplaces insulated from extreme temperatures, and healthy schools free from dirty air.

Action is needed today, because most buildings will be standing for generations to come. Missing this opportunity locks in the problem for our children and grandchildren, but delivering on this commitment will provide benefits for our citizens to enjoy long into the future. From lower energy bills for all, including our most vulnerable citizens, to reduced greenhouse gas emissions and cleaner air, the positive impacts of action are undeniable.

As mayors we are determined to lead the way. Yet we alone cannot transform the buildings, great and small, historic and new, in our cities. We will introduce regulations or planning policies for net zero carbon buildings where possible within our power and authority. We want to work with state and regional governments, who also play a crucial role in setting standards for buildings, and we welcome the leadership of those who have already committed to net zero carbon buildings. The private sector is another essential player in creating green and healthy buildings. We congratulate the businesses that have signed the [World Green Building Council's](#) Net Zero Carbon Building Commitment, and welcome them to our cities. We look forward to our collective commitment inspiring the same level of ambition and action from national governments, who play a critical role in setting standards for buildings.

To ensure that our cities deliver on the highest ambition of the Paris Agreement and develop the net zero carbon buildings of the future:

We pledge to enact regulations and/or planning policy to ensure new buildings operate at net zero carbon by 2030 and all buildings by 2050.

To meet this commitment, we will:

- Establish a roadmap for our commitment to reach net zero carbon buildings.
- Develop a suite of supporting incentives and programmes.
- Report annually on progress towards meeting our targets, and evaluate the feasibility of reporting on emissions beyond operational carbon (such as refrigerants).

[CITIES CAN ADDITIONALLY MAKE A COMMITMENT ON MUNICIPAL BUILDINGS, AS FOLLOWS]

Additionally, in many of our cities, our municipal buildings represent a significant proportion of our building emissions, and they offer a large opportunity for rapid action. We can use them to pilot innovations, build capacity in our local markets, and inspire others to follow our leadership.

We commit to owning, occupying and developing only assets that are net zero carbon in operation by 2030.

To meet this commitment, we will:

- Evaluate the current energy demand and carbon emissions from our municipal buildings, and identify opportunities for reduction.
- Establish a roadmap for our commitment to reach net zero carbon municipal buildings.
- Report annually on progress towards meeting our targets, and evaluate the feasibility of including emissions beyond operational carbon (such as refrigerants).

Advancing Towards Zero Waste Declaration

Cities on every continent are rising to the challenge of delivering on the highest ambition of the Paris Agreement. The sustainable, prosperous and liveable cities of the future will ultimately need to be zero-waste cities.

Waste management is one of the primary services that city governments provide and is a sector over which mayors exercise significant authority. The mayors of the world's great cities recognize that action on waste management is key to making our urban centres cleaner, healthier, more resilient and inclusive.

Global waste generation is [increasing faster than any other environmental pollutant](#). Therefore, action in this sector can have a much greater impact on reducing greenhouse gas emissions (GHG) [than the current emission inventories suggest](#). The International Solid Waste Association estimates that when all waste management actions, including disposal, recycling, composting and treatment, are considered, the waste sector could cut 10 to 15% of GHG emissions globally. When actions to reduce waste generation are also taken into account, [the sector could reduce up to 20% of the global emissions](#).

Food waste is a particularly critical issue. Currently, one-third of all the food produced for human consumption is lost or wasted, amounting to 1.3 billion tonnes every year. When food waste decays in landfills, it produces methane, a greenhouse gas 87 times more potent than CO₂ at retaining heat in the atmosphere over a 20-year period and [already causing 25% of current global warming](#). Yet when food scraps are separated and treated rather than sent to landfills, they can produce compost to grow new food and [enhance the soil's carbon capture capacity to pull CO₂ from the atmosphere](#), and recover energy through anaerobic digestion and biogas utilization.

For other types of waste, reuse and recycle schemes will not only reduce the amount of waste sent to landfill or incinerators but can create jobs and economic opportunities for social entrepreneurs and vulnerable communities.

Cities are also embracing the concept of the circular economy, by not just reducing the amount of waste disposed of in landfills and incinerators but also working to decouple economic activity from the consumption of finite resources. These cities are taking action to keep resources in the economic system for as long as possible and phase waste out of the system. Circular economy initiatives can protect natural resources, clean the air that citizens breathe and the water they drink, whilst also making cities more efficient, prosperous and competitive.

To deliver our ambitious climate goals, we know that by 2030 we must have transformed our solid waste and material management systems to put us on track for a climate-safe future. That is why, as mayors of world leading cities, we are accelerating the transition towards a zero waste and more regenerative future by taking ambitious, measurable and inclusive actions to reduce municipal solid waste generation and improve materials management in our cities.

We pledge to advance towards zero waste cities by: 1) reducing the municipal solid waste generation per capita by at least 15% by 2030 compared to 2015; and 2) reducing the amount of municipal solid waste disposed to landfill and incineration by at least 50% by 2030 compared to 2015, and increase the diversion rate away from landfill and incineration to at least 70% by 2030.

To achieve these bold targets, we commit to implement actions such as:

- Reduce food losses and wasting of food at the retail and consumer levels by decreasing losses along production and supply chains, minimising the production of surplus food, and facilitating safe food donation and by-products for feed production.
- Implement source separated collection for food scraps and other organics and treatment infrastructure that recovers nutrients, energy and contributes to the restoration of carbon storage capacity in soils.
- Support the implementation of local and regional policies, such as extended producer responsibility and sustainable procurement, to reduce or ban single-use and non-recyclable plastics and other materials, while also improving goods reparability and recyclability.
- Increase reduction, reuse, recovery and recycling of construction and demolition materials.
- Increase accessibility, awareness, scale and inclusivity of reduction, reutilization and recycling programmes and policies for all communities and neighbourhoods, investing in city wide communication and engagement efforts, offering resources in multiple languages, and ensuring benefits are distributed equitably across the city population.
- Publicly report every two years on the progress the cities are making towards these goals.