

Zero Carbon Buildings for Melbourne – Discussion paper

Online general: 10 October

Presenters: Dominique/Kirsten/John - Zero Carbon Cities Team

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Acknowledgement



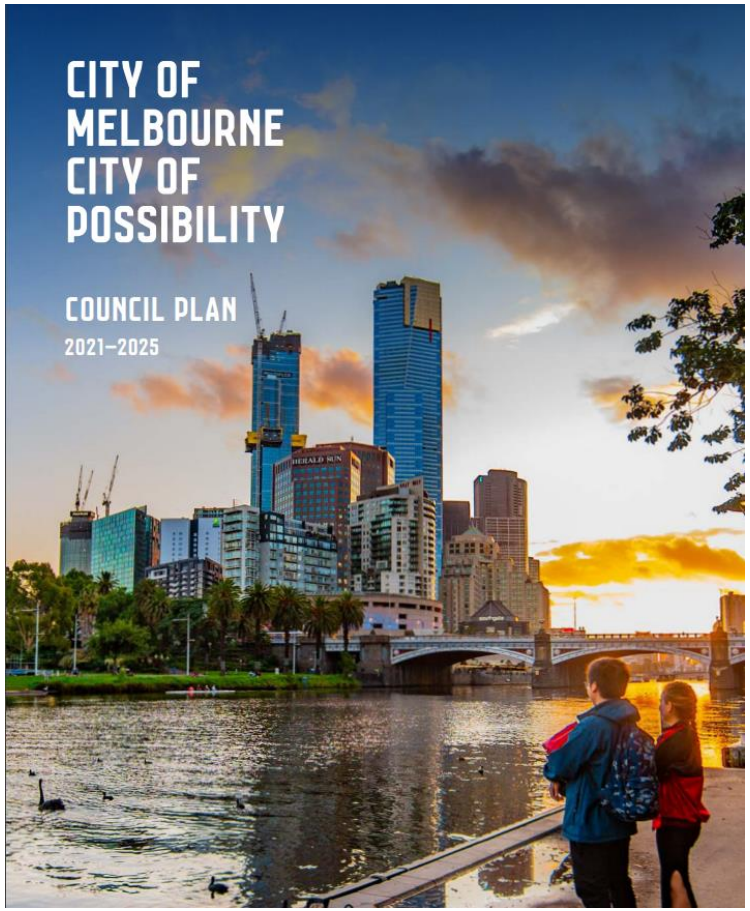


Image source: https://visibleprocrastinations.wordpress.com/2022/09/04/september-poorneet-tadpole-season/

Purpose

- We have a climate emergency
- We want to respond in a way that causes the least disruption and creates the greatest opportunities
- We want to do it together
- Framing – content
- Today – your questions





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Background

1. Council have committed to getting to **net zero emissions** 2040

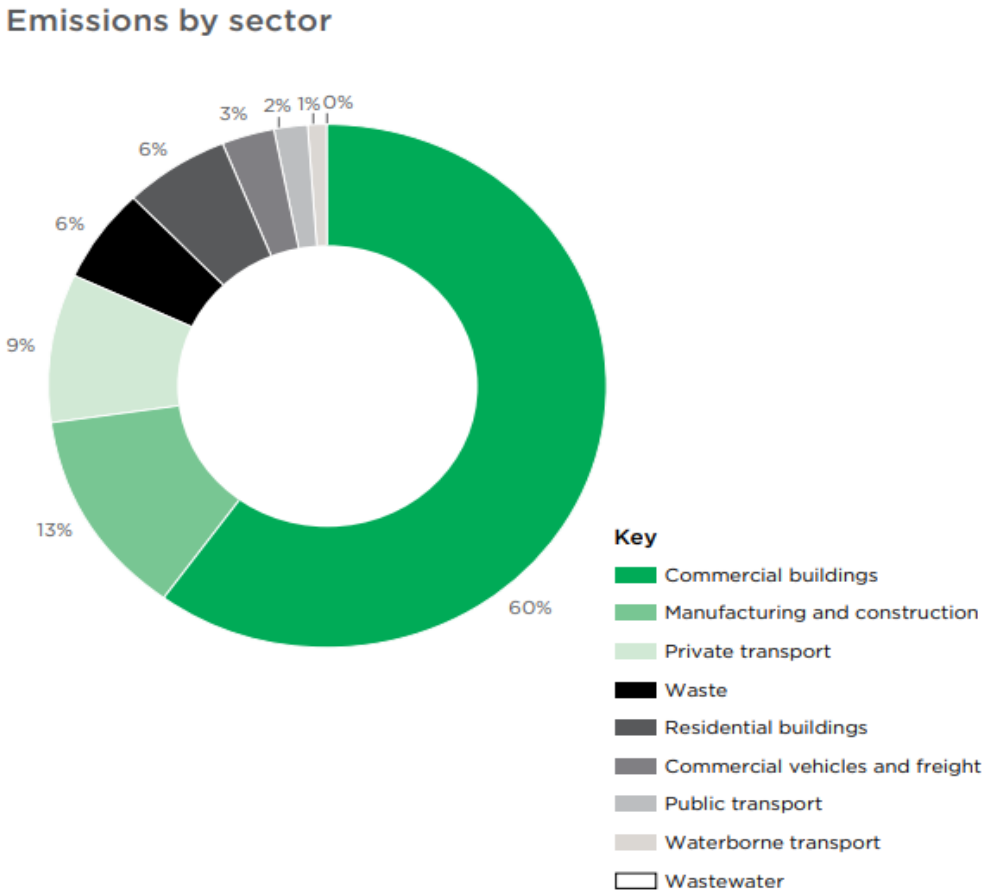
2. **66 per cent** of City of Melbourne's carbon emissions generated by its buildings (60 per cent commercial)

3. Zero net emissions target by 2040: **will not be achieved** at the current rate of retrofits

4. We have a role in **supporting** the building residents, industry, owners and tenants to meet their zero carbon commitments

5. Significant market **failures** and regulatory **lag** at play

6. Many initiatives **tried** by CoM and others with mixed results



Key problem

1. We are decarbonising the grid

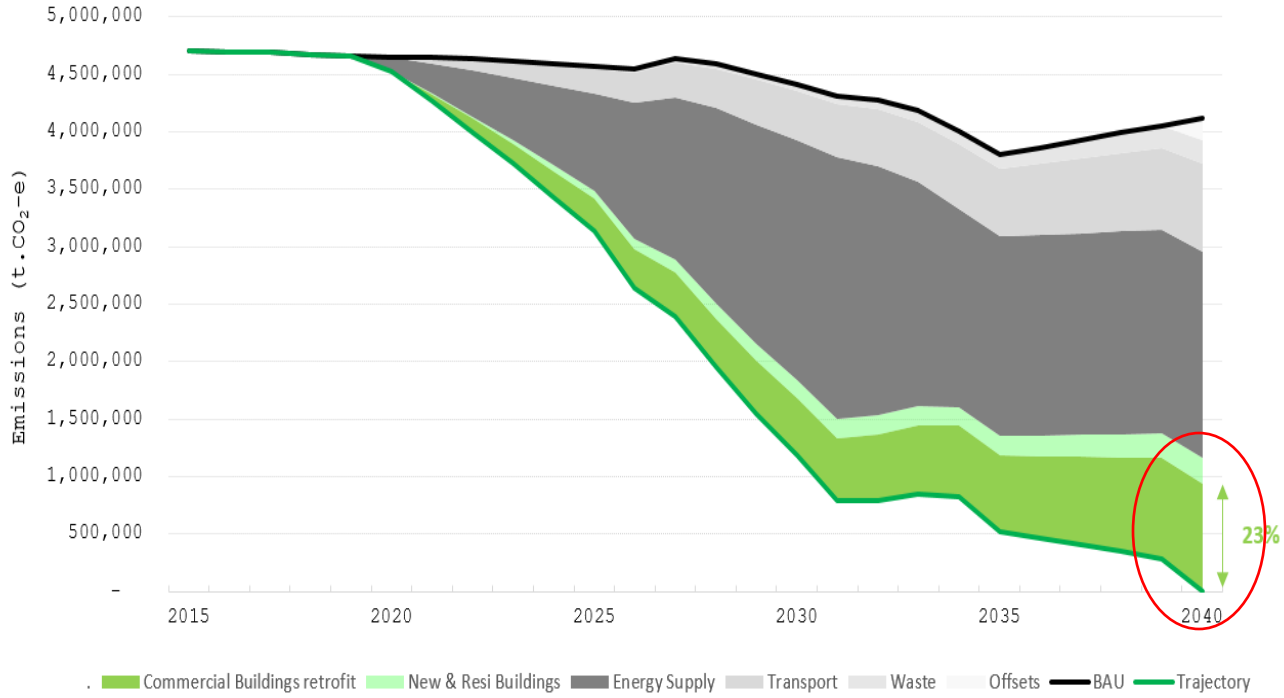
BUT without decarbonising buildings we will be 23% short by 2040

2. Therefore need a zero carbon building plan and set of actions worked on together with everyone influenced

3. Together we will get there

AND

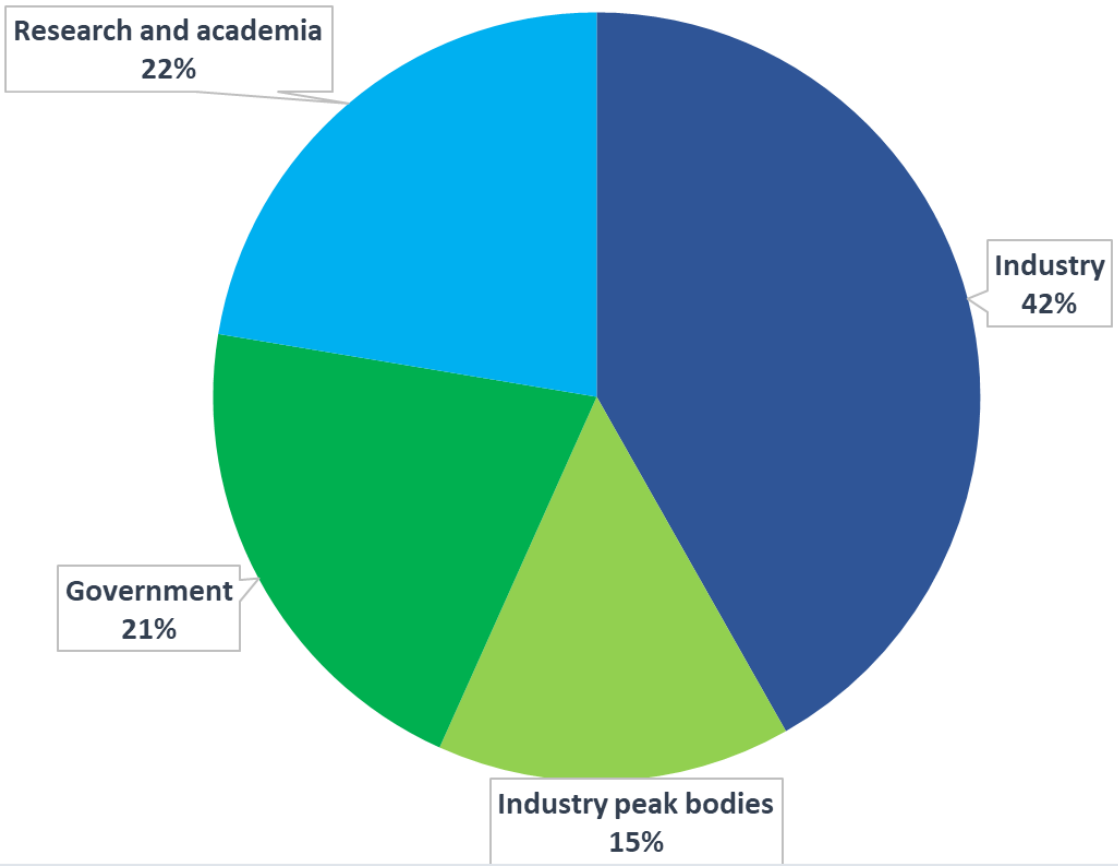
4. It means buildings that are healthier to occupy and cheaper to run



Industry engagement

In developing the Zero Carbon Buildings Discussion Paper, we have had 70 conversations with stakeholders such as property, government, national and international literature and experts.





What is a zero carbon building



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What is a zero carbon ready building

Residential – 6% of emissions – working with you to define it

- **Starting with the tactical initiative of community batteries**
- **Now want to know from you what you need to get to zero carbon**

Commercial – 60% of emissions – working with industry to define it

- **5 Star NABERS whole of building**
- **Electrified**
- **Carbon Action plan**
- **Ongoing reporting**



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Draft Initiatives – these are high level and aimed at commercial building – any building with office functionality

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3 levers and 7 initiatives for testing with industry

Tools, data and information

1. Developing and promoting zero carbon building leases
2. Developing and promoting carbon risk tool
3. Incentivising periodic commercial building disclosure

Working with industry

4. Facilitation of aggregation of buildings for joint procurement
5. Convening zero carbon building retrofit teams

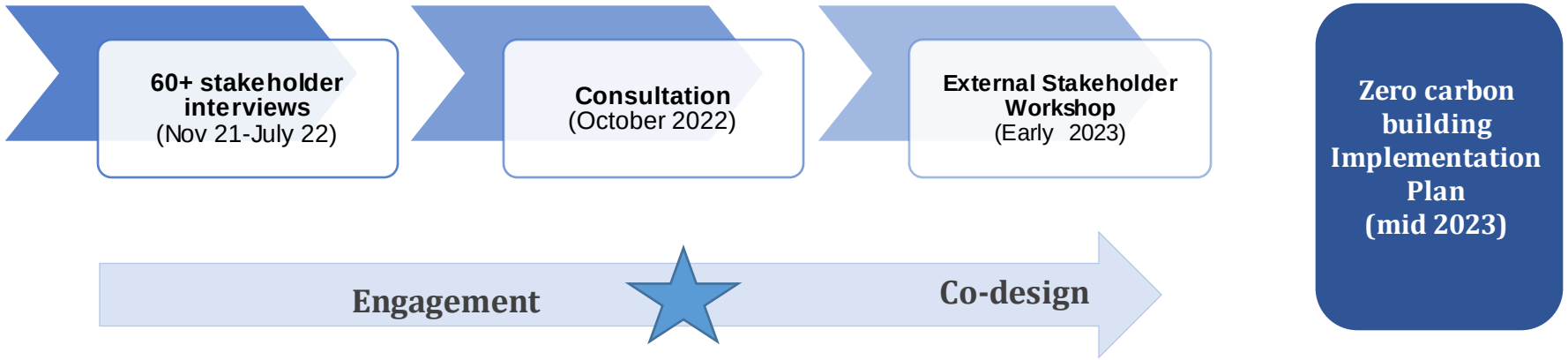
Regulatory reform

6. Incentivising performance through rates
7. Introduction of an emissions cap through a local law



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Next steps and questions



For further information please contact Kirsten.MacLeod@melbourne.vic.gov.au

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Initiatives for testing with industry

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Proposed Initiative: develop Zero Carbon Lease framework, adapting Green Leases, a well established tool

- Through a Zero Carbon Lease, tenants, building owners and managers commit to zero carbon targets through leases
- Gives tenants and building owners ability to clearly meet energy performance disclosure and zero carbon commitments

Issues it addresses

- Split incentives between building owners and tenants to pay for improvements
- Addresses information asymmetries between tenants and building owners



Proposed initiative: Create a tool or resources for mid tier building owners to understand carbon risk

- As the climate changes and economy transforms away from fossil fuels, building owners face physical climate risks (e.g.; heatwaves/flooding) and transition risks (e.g.; inefficient and fossil fuel dependent assets)
- Understanding and monetising the future risk of carbon for a building and or portfolio could inform better investment decisions
- Climate risk already being considered premium investors but not mid tier building owners
- This metric enables investment decisions to be made around impact on building value of its carbon footprint.
- The mid tier need a simpler method to understand climate risk

Issues it addresses:

- Lack of owner capacity to understand future risk
- Simplifies complex issue



Proposed initiative: Provide incentives for building owners or tenants to report energy rating.

- Exact form of incentive to be developed with industry input
- Improves measurement and disclosure of energy performance prior to changes to the Federal Commercial Building Disclosure (CBD) regulations.

Issues it addresses

- Information asymmetries
- Poor/no data on energy performance of many of the cities buildings
- Lack of data constrains Governments' ability to create coherent programs based on evidence
- Building owners don't make long term investment decisions



Proposed initiative: **Aggregate buildings for joint procurement of advisory services and equipment**

- Economies of scale means ability to access better advice, purchasing power and learning together
- Enables mid and low tier buildings to get access to advice they might not be able to afford otherwise
- Aggregation geographically or by type of building could include a block, 3 story 1950s buildings or parking garages

Issues it addresses:

- Affordability of advice
- Cost of equipment
- Lack of time



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Proposed Initiative: Establish a building retrofit team including consultant, building owner, building manager, tenants and potentially finance and academia. Team collaboratively creates a long term decarbonisation plan for a building or group of buildings

- Shifts industry from transactional to relational ways of working

Issues it addresses:

- Current retrofits and upgrades are reactionary (investment only when something breaks), this supports a more proactive approach with planned investment
- Aligns interest between stakeholders
- Reduces wasted effort (e.g.; consultant reports sitting on a shelf)
- Low learning rate due to lack of analysis and sharing of lessons
- Skills and capacity lag
- Unlocks finance



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Proposed Initiative: Use rate charging to encourage emissions reduction, based on energy performance rating uplift.

- An economic and emissions analysis was carried out demonstrating that differential rates can drive emissions reduction from the mid-tier office sector.
- This would mean a targeted rate-in-the-dollar reductions (over 10-15 years) for buildings that undertake upgrades to increase their NABERS ratings.
- This is funded by maintaining - or in some scenarios increasing - the rate-in-the-dollar applied to buildings who do not participate, rather than reducing this rate as property values increase.

Issues it addresses:

- Reduces financial benefits of land banking poor performing buildings
- Lack of understanding/engagement in energy performance and retrofit opportunities from mid tier owners



Proposed initiative: Set emissions cap through local law

- Fine or penalise building owners who emit emissions above certain level
- Based on NYC model

Issues it addresses:

- Prices a negative externality (carbon emissions)
- Reduces financial benefits of land banking poor performing buildings
- Potential to unlock capital for retrofits if hypothecated revenue approach used

