# PUBLIC DISCLOSURE STATEMENT

CITY OF MELBOURNE

ORGANISATION CERTIFICATION
FY2020–21

Australian Government

# Climate Active
# Public Disclosure Statement

CITY OF MELBOURNE

An Australian Government Initiative

Climate Active

| | |
|---|---|
| NAME OF CERTIFIED ENTITY | CITY OF MELBOURNE |
| REPORTING PERIOD | 1 July 2020 – 30 June 2021 |
| DECLARATION | *To the best of my knowledge, the information provided in this public disclosure statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.*<br><br>Signature:  Date 28 / 10 / 2021 |
| | Justin Hanney<br>Chief Executive Officer |

Australian Government
Department of Industry, Science, Energy and Resources



Version September 2021. To be used for FY20/21 reporting onwards.

# 1.CERTIFICATION SUMMARY

| | |
|---|---|
| TOTAL EMISSIONS OFFSET | 11,210 $tCO_2$-e |
| OFFSETS BOUGHT | 100% VCUs |
| RENEWABLE ELECTRICITY | 98.25% |
| TECHNICAL ASSESSMENT | Next technical assessment due: FY2021-22 |

Contents

# 2.CARBON NEUTRAL INFORMATION

## Description of certification

The City of Melbourne is certified carbon neutral for council operations. This certification covers all City of Melbourne facilities, as well as major contracts and services.

*"City of Melbourne is committed to leading the community transition to a zero emissions city."*

## Organisation description

The City of Melbourne (ABN  55 370 219 287) , legally known as the Melbourne City Council, is one of 79 councils in Victoria operating as a public statutory body incorporated under the Victorian Local Government Act 1989.

The City of Melbourne sits at the heart of Greater Melbourne, the state capital of Victoria and is Australia's second largest city. The municipality covers 37.7 square kilometers, spanning the Melbourne city center and surrounding areas (see Figure 1), and has a residential population of 184,000.

As a local government authority, the City of Melbourne strives to achieve its community's vision of a bold, inspirational and sustainable city. To lead the city towards this vision, the City of Melbourne is focused on reducing its own environmental impact. In 2019, the City of Melbourne declared a climate and biodiversity emergency and amended its target to zero emissions for the municipality to 2040, ten years ahead of schedule. Actions to achieve this are set out in the City of Melbourne's Emissions Reduction Plan for our Operations 2016-2021. The Plan also outlines a commitment to maintain carbon neutrality for our operations.

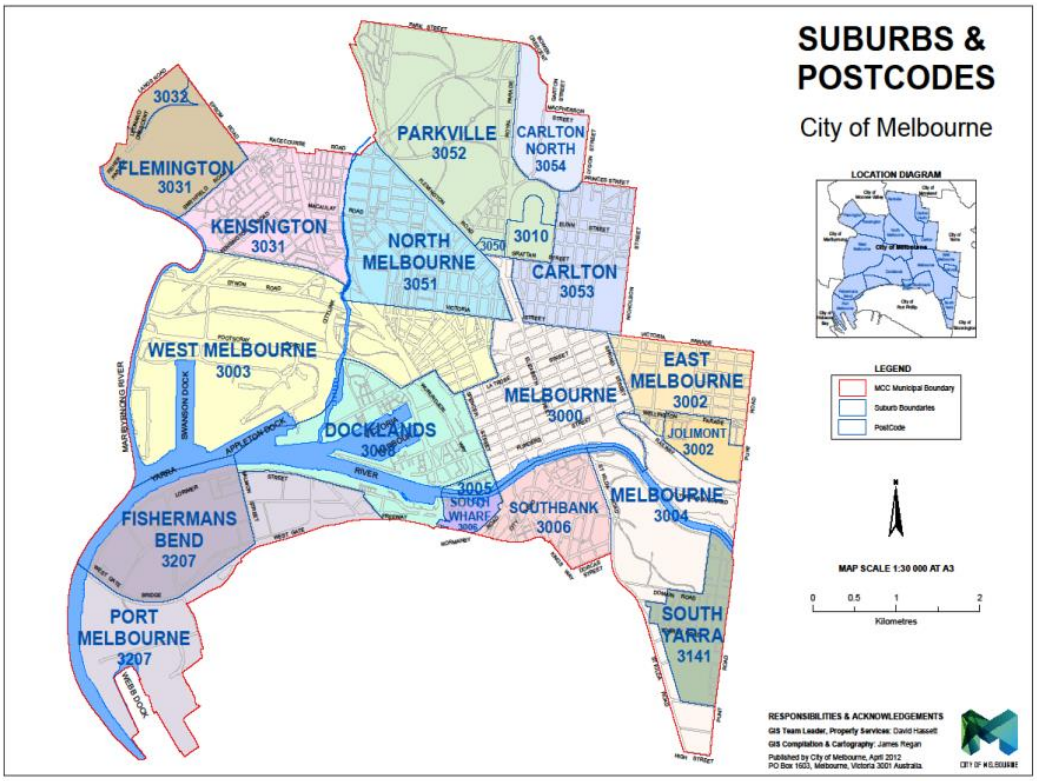


Figure 1: City of Melbourne boundary map

**Services and Facilities**

The City of Melbourne is responsible for maintaining an extensive range of facilities and delivering a diverse range of services. The community infrastructure maintained by the City of Melbourne includes roads, bridges, drains, town halls, libraries, recreation facilities, child care centres, community hubs, event venues, parks and gardens.

The majority of the City of Melbourne's operations are run out of three main administrative buildings in the central business district, including the Melbourne Town Hall, Council House 1 and Council House 2.

Additional operations are run out of a number of external sites and facilities located throughout the municipality. The City of Melbourne owns and/or operates more than 350 buildings, parks, gardens and other facilities.

The services provided by the City of Melbourne include property, economic, human, recreational and cultural services. The City of Melbourne also enforces state and local laws relating to matters of land use, planning, environment protection, public health, traffic and parking, and animal management.

Below is an overview of the services and operations undertaken by the City of Melbourne during 2020-21:

- Animal management
- Community and cultural services
- Event management and sponsorship
- Health services
- Local laws
- Parks, gardens and open space
- Planning and building
- Recreation services
- Roads and parking
- Strategic planning
- Sustainability
- Waste management

# 3.EMISSIONS BOUNDARY

The City of Melbourne's greenhouse gas emissions inventory has been prepared according to the Climate Active Carbon Neutral Standard. The emissions boundary is consistent with the GHG Protocol Corporate Accounting and Reporting Standard:

- *Organisational boundary:* The City of Melbourne uses the operational control approach for measuring and reporting on the organisation's emissions. The City of Melbourne includes emissions from all activities over which we have full operational control (see Figure 2).
- *Operational boundary:* The emissions inventory includes direct emission sources (scope 1), emissions from purchased energy (scope 2) and other measurable indirect emission sources (scope 3) that are material to the City of Melbourne's operations.

## Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

**Quantified emissions** have been assessed as relevant and are quantified in the carbon inventory. This may include emissions that are not identified as arising due to the operations of the certified entity, however are **optionally included**.

**Non-quantified emissions** have been assessed as relevant and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

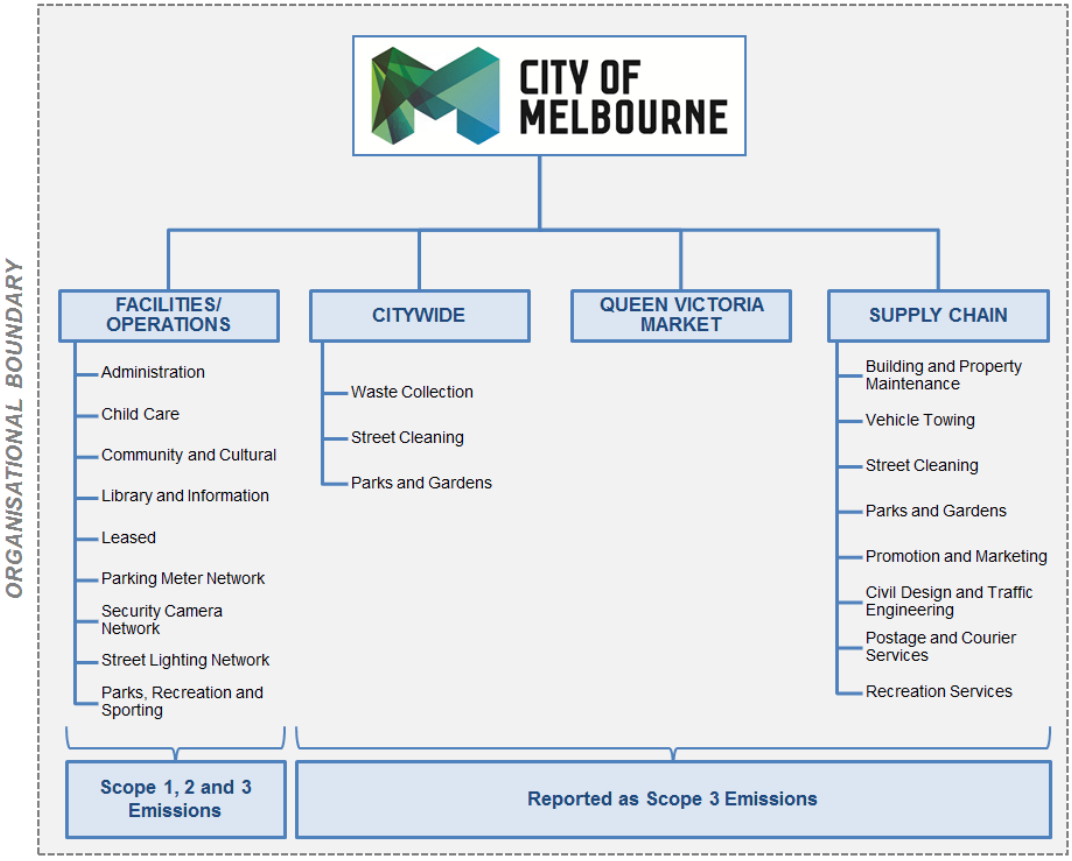


Figure 2: Organisational and operational boundary

The following greenhouse gases have been considered:

- Carbon dioxide $CO_2$
- Methane $CH_4$
- Nitrous oxide $N_2O$
- Synthetic gases HFCs, $SF_6$, $CF_4$, $C_2F_6$

The following emission sources have been included:

| EMISSIONS SOURCE | SCOPE |
|---|---|
| Natural gas | 1, 3 |
| Transport fuels | 1, 3 |
| Stationary fuels | 1, 3 |
| Refrigerants | 1 |
| Grid electricity | 2, 3 |
| Waste disposal | 3 |
| Reticulated water | 3 |
| Subsidiaries | 3 |
| Supply chain | 3 |
| Staff and volunteer travel | 3 |

## Outside the emissions boundary

**Excluded emissions** are those that have been assessed as not relevant to City of Melbourne's operations and are outside of its emissions boundary or are outside of the scope of the certification. These emissions are not part of the carbon neutral claim. Further detail is available at Appendix D.

The following emissions sources have been excluded in line with the provisions of the Climate Active Standard for Organisations. The impact of excluding these sources is not expected to materially affect the overall total emissions.

| Emission source | Scope | Justification for exclusion & overall implications for footprint |
|---|---|---|
| Citywide (non-CoM contract)* | 3 | Citywide is a wholly owned subsidiary that is not under City of Melbourne's operational control. Citywide emissions not associated with City of Melbourne usage have been excluded. City of Melbourne includes 25% of Citywide's emissions, as this is the proportion of Citywide's revenue associated with service provision to City of in 2020-21. This is consistent with the method used for all contractors. |
| Municipal waste disposal at third party facilities | 3 | The City of Melbourne includes emissions associated with waste generated during the course of business, i.e. within the operational control of the City. The emissions associated with waste generated by residents and businesses (municipal, commercial, industrial, construction and demolition waste streams) have been excluded, as these waste streams are not under the City's operational control.<br><br>However it should be noted the City collects and transports a portion of this waste, Waste collected during the course of street cleaning is excluded, as the City has no operational control over this waste. However the emissions resultant from Citywide transporting this waste is included in within our emissions. |

| | | |
|---|---|---|
| Animal Management | 3 | Animal management is primarily serviced in-house by City of Melbourne staff and the fuel used is included in the corporate fleet emissions source. There are instances where the collection of animals is undertaken by the RSPCA but these are considered insignificant (less than 10 pick-ups per month). |
| Upstream transportation & distribution | 3 | The City of Melbourne has included transportation and distribution of goods and services for seven emissions sources; towing, parks and recreation, building and property maintenance, street cleaning, security services, coin collection and aged and disability services. The remaining emissions sources with transportation and distribution have been excluded due to lack of reliable data from suppliers. These include office paper, animal management, promotion and marketing, and civil design and traffic engineering. |
| Business travel (regional) | 3 | The City of Melbourne currently includes metropolitan public transport use by staff, hire cars, taxis, flights and use of its own fleet. Business travel undertaken by regional public transport or in employee vehicles are excluded due to lack of reliable data. |
| Downstream transportation & distribution | 3 | The City of Melbourne does not sell products. |
| Processing, use & end of life of sold products | 3 | The City of Melbourne does not sell products. |
| Capital goods | 3 | The City of Melbourne purchases and maintains capital goods to support the delivery of Council services. The operational emissions from this equipment is included within the inventory (eg, emissions from gas from use in hot water units) however the embodied emissions in the purchasing of these Capital goods themselves is excluded due to a lack of reliable methodology for equipment types. |
| Investments | 3 | Council holds no financial investments (as defined under the Greenhouse Gas Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard) as its investments are held in term deposits with no link to any specific products or services. Council have limited resources to collect this information. Implication for the footprint considered to be immaterial |
| Community Emissions | 3 | Emissions that are resultant from activity within the broader municipality of the City of Melbourne but are not the result of activity of the City of Melbourne operations are excluded. The City of Melbourne reports on these through a separate reporting framework using the GHG Protocol standard developed by C40 |

**Inside emissions boundary**

**Quantified**

***City of Melbourne***

- *Electricity*
- *Stationary energy*
- *Natural Gas*
- *Water*
- *Waste*
- *Transport Fuel*
- *Refrigerants*
- *Paper*
- *Business Travel –flights, taxi,*
- *Staff Commute to Work*
- *Working from Home*
- *Waste*
- *Recycling*
- *Street lighting*

***Subsidiaries***

- *Queen Vic Markets*
  - *Electricity*
  - *Natural Gas*
  - *Fuel*
- *Citywide*
  - *Electricity*
  - *Natural Gas*
  - *Fuel*
  - *Waste*

***Supply chain***

- *Electricity*
- *Natural gas*
- *Fuel*
- *Refrigerant*
- *Waste*
- *Water*
- *Chemicals*

**Non-quantified**

- *Purchased goods and services with < 0.5% expenditure*
- *Web Hosting & Services*
- *Video / Filming / Photography*
- *Catering*
- *Real Estate Services*

**Outside emission boundary**

**Excluded**

- *Citywide (non-CoM contract)**
- *Municipal waste disposal at third party facilities*
- *Animal Management*
- *Upstream transportation & distribution*
- *Business travel (regional)*
- *Downstream transportation & distribution*
- *Processing, use & end of life of sold products*
- *Capital goods*
- *Investments*
- *Community Emissions*

**Citywide is a wholly owned subsidiary that is not under City of Melbourne's operational control. Citywide emissions not associated with City of Melbourne usage have been excluded. City of Melbourne represents 25% of Citywide's revenue and thus emissions not associated with service provision to City of Melbourne are excluded*

## Data management plan for non-quantified sources

The data management plan below outlines how more rigorous quantification can be achieved for material (greater than 1%) non-quantified emission sources.

The City of Melbourne maintains an internal reporting procedures document. This document outlines the reporting process and acts as a guide for the relevant reporting officer to assist in preparing the Climate Active inventory in an accurate, transparent and timely manner.

Utility data for gas, water and electricity is collated on a carbon management software platform. The software provider collects data directly from utility providers and the City reporting officer manually uploads supply chain data.

A materiality test is used to initiate the reporting process to determine the major areas of business activity and associated emissions. The assessment looks at total expenditure across the organisation through account codes for all purchased goods and services. All sources that are equal or greater than 0.5% of the total expenditure are assessed for possible inclusion. Anything outside this range is excluded as immaterial and an uplift factor is applied.

For everything within range, the reporting officer requests data directly from the contractors and suppliers. These data owners are provided with a template for providing information on the energy, water, waste, and materials used in line with the services provided to the City of Melbourne. Provision of environmental data is included as a standard clause in City of Melbourne contracts. Where contractors and suppliers are unable to provide reliable data the City of Melbourne works with these specific contractors to build their capacity to provide suitable data.

| Non quantified emission sources | Data management plan to quantify these sources |
|---|---|
| Purchased goods and services with < 0.5% expenditure | City of Melbourne will review the threshold every three years in line with technical assessment requirements to assess if it remains appropriate. |
| Web Hosting & Services | Majority (80%) of data is hosted and stored in on premises servers and emissions from energy use are captured through building electricity usage. The remaining data is stored in the cloud. Investigations are underway with City of Melbourne IT team to determine how to accurately quantify energy use data from these solutions to determine if it represents material emissions. |
| Video/Filming/Photography | Video/Filming/Photography services are undertaken by a significant number of contractors, Individually these emissions are considered to be immaterial however emissions source is aggregated within our expenditure report and thus falls above the 0.5 per cent expenditure threshold. An appropriate uplift factor will be applied. |
| Catering | Majority of Catering is undertaken through single contractor within the Melbourne town hall, emissions are included within energy use of the building. Catering at sites external to City of Melbourne are not quantified. Emissions are considered to be immaterial and covered through uplift factor. |
| Real Estate Services | Expenditure items falls above 0.5 per cent threshold however emissions are considered to be immaterial and covered through uplift factor. |

# 4.EMISSIONS REDUCTIONS

## Emissions reduction strategy

The City of Melbourne's Emissions Reduction Plan (ERP) for Council Operations summarises the actions the City will take to reduce emissions from activities and operations between 1 July 2016 and 30 June 2021, and maintain carbon neutrality. The ERP includes emission reduction targets reflective of the 2015 Paris Climate Change Agreement. The actions described in the ERP will achieve further emission reductions of 4.5% per year to meet or exceed the 1.5°C science-based target.

## Emissions reduction actions

The ERP describes actions the City of Melbourne has taken to reduce emissions from activities and operations across seven priority areas:

1. Develop a low carbon culture
2. Celebrate Melbourne, without the emissions
3. Zero carbon for our buildings
4. Revitalise Queen Victoria Market
5. Carbon neutral goods and services
6. Zero carbon transport
7. Reduce emissions from waste

**Melbourne Renewable Energy Project**

The Melbourne Renewable Energy Project (MREP) marked the first time in Australia that a group of local governments, cultural institutions, universities and corporations collectively purchased renewable energy from a newly built facility.

The 39-turbine Crowlands Windfarm near Ararat is owned and operated by Melbourne-based clean energy company Pacific Hydro. Under this project, fourteen members of the buying group combined their purchasing power and committed to purchase 88 GWh of electricity per year from the windfarm under a long-term power purchase agreement. The agreement enabled financing and construction arrangements for the project; and because the windfarm generates more than the purchasing group's needs, it brings additional renewable energy into the market.

The windfarm began supplying energy from 1 January 2019 and from this date the City of Melbourne's electrical load has been powered by renewable energy. The renewable energy certificates generated by the windfarm are surrendered on behalf of City of Melbourne by our electricity retailer and the electricity usage is treated as zero emissions.

**Solar**

Since 2003 the City of Melbourne has undertaken multiple solar photovoltaic installations to reduce Council's reliance on Victoria's carbon-intensive electricity grid.

Two new solar systems were installed in FY21

- Royal Park North Depot
- Lady Huntingfield

One existing solar system at the Queen Vic Market was decommissioned and will be replaced with a larger system in FY22 as part of a wider redevelopment.

As of 30 June 2020, the City of Melbourne held 841 kW of solar capacity across 27 sites:

| Installed Capacity | Site |
|---|---|
| 200 kW | North Melbourne Football Club |
| 99.8 kW | Kensington Recreation Centre |
| 85 kW | Library at the Dock |
| 52 kW | Fitzroy Garden Depot |
| 45.8 kW | Carlton Baths (2) |
| 38.9 kW | Kensington Flemington Bowls |
| 38 kW | Gowrie Child Care |
| 35.1 kW | Community Hub at The Dock (2) |
| 30 kW | Community Hub at The Dock (1) |
| 27 kW | Fitzroy Garden Visitor Centre |
| 20 kW | Boyd School |
| 20 kW | Flagstaff Bowls Club |
| 15.6 kW | Carlton Baths (1) |
| 15.6 kW | Fawkner Park Children's Centre & Senior Citizens Centre |
| 15.6 kW | Kensington Family Services |
| 10.4 kW | East Melbourne Library |
| 10.4 kW | Kensington neighbourhood Centre |
| 7.5 kW | Royal Park North Depot |
| 6.24 kW | North Melbourne Children's Centre |
| 5.1 kW | The Venny |
| 4.8 kW | Urban Camp |
| 3.6 kW | CH2 |
| 3.23 kW | Art Play |
| 2.3 kW | North Melbourne Baths |
| 1.3 kW | Signal |
| 7.5 kW | Royal Park North Depot |
| 40.3 kW | Lady Huntingfield |

**Energy Efficiency**

The City of Melbourne's ERP and Asset Management Strategy 2015-2026 help to ensure we make the right decisions about community assets, with the right information, by establishing the correct data and processes. The integration of these three elements helps ensure best practice energy efficiency technology is delivered across the life cycle of assets. During FY21, control upgrades were completed across a number of administration buildings and a feasibility study conducted to investigate the shifting of all City of Melbourne buildings assets from gas to electricity.

**Waste Reduction**

The City of Melbourne's Waste and Resource Recovery Strategy 2030 addresses the emissions generated by waste across the municipality and sets a key target of 1.2Mt $CO_2$-e in greenhouse gas emissions avoided by 2030. The strategy outlines key activities to enhance the circular economy that will

reduce environmental impacts, improve the amenity and livability of the city, and make the waste and resource recovery system more resilient. The City of Melbourne does not own or operate any landfills; however the waste collected from our facilities is taken to organics and comingled recycling stations and landfills outside the municipality. The indirect emissions associated with recycling and waste collected at our facilities is included in our operational emissions inventory.

**Transport**

Staff at the City of Melbourne regularly travel by foot, cycling with electric bicycles, taking public transport and driving electric vehicles to avoid emissions through the use of petroleum and diesel run vehicles. Employee commutes have been largely reduced as a result of the COVID-19 lockdowns. Emissions from any work-related air travel are offset. Carbon neutrality for the vehicle fleet is maintained through: offsetting transport fuel, reducing fleet size, reducing the vehicle engine size, introducing hybrid and electric vehicles, charging electric vehicles in car parks owned by the City of Melbourne, and increasing the weighting given to fuel efficiency in the evaluation criteria for new vehicle purchases. The City of Melbourne's corporate vehicle fleet comprises 75 vehicles, including 19 fully electric vehicles, 20 hybrid vehicles and 10 plug-in hybrid electric vehicles. Electric and hybrid vehicles constitute 65% of City of Melbourne's total fleet (a 12% increase from 2019-20).

**Events**

Since 2018-19, the City of Melbourne has maintained a certified carbon neutral large events portfolio, with the inclusion of Melbourne Fashion Week, Melbourne Music Week and Melbourne Knowledge Week. The COVID-19 lockdowns resulted in the certification of only Melbourne Knowledge Week for 2020-21, with all other events being cancelled. The emissions savings from Melbourne Knowledge Week included:

- Increasing the use of digital and virtual content.
- Using 100 percent renewable energy at a main MKW hub and encouraging other venues to purchase GreenPower.
- Reducing virgin materials in hub fit outs through arrangements with theming contractors.
- Communicating sustainable transport choices through attendance information and an augmented reality activation on transport choices at a main MKW hub.

The City of Melbourne aims to resume certification of its full event portfolio in 2021-22.

**Emissions Reduction Plan 2021–26**

This reporting period marks the completion of the Emissions Reduction Plan 2016–21. Building on the success of this plan, the City of Melbourne has initiated the Emissions Reduction Plan for 2021–26, which sets the path for our operational emissions reduce towards zero emissions by 2040, whilst also demonstrating innovation and leadership to the Melbourne community.

# 5.EMISSIONS SUMMARY

## Emissions over time

The below table summarises the total emissions of each reporting period since the City of Melbourne started reporting through Climate Active (formally National Carbon Offset Standard) in 2011-12.

| Emissions since base year | | |
|---|---|---|
| | | Total $tCO_2$-e |
| Year 1: | 2011–12 | 52,059 |
| Year 2: | 2012–13 | 49,030 |
| Year 3: | 2013–14 | 50,967 |
| Year 4: | 2014–15 | 46,125 |
| Year 5: | 2015–16 | 43,083 |
| Year 6: | 2016–17 | 37,172 |
| Year 7: | 2017–18 | 35,914 |
| Year 8: | 2018–19 | 23,706 |
| Year 9: | 2019–20 | 12,346 |
| Year 10 | 2020–21 | 11,209 |

## Significant changes in emissions

The City of Melbourne has seen a steady decline in emissions each year. In total, the City of Melbourne's operational emissions have reduced by 78 per cent from our 2011-12 baseline. Emission reductions have been driven largely by our Emissions Reduction Plan, however reductions have far exceeding the science-based targets set out in this Plan.

- Reductions between FY16 and FY18 are attributable to major energy efficiency program funded by the Clean Energy Finance Corporation (CEFC).
- Significant step changes between FY19 and FY20 were a result of the purchase of renewable energy through the Melbourne Renewable Energy Project.
- Changes between FY20 and FY21 are largely due to COVID-19 lockdown impacts.

**Changes in emission source categories**

The below table summarises the reasons for significant (+/- 5%) change in emission source categories between this year (FY21) and the previous year.

| Emission source name | Current year ($tCO_2$-e and/ or activity data) | Previous year ($tCO_2$-e and/ or activity data) | Detailed reason for change |
|---|---|---|---|
| **Diesel oil (post-2004)** | 3,194,990 | 3,050,512 | Increased activity reported by Citywide (Melbourne subsidiary) |
| **Diesel oil** | 682,904 | 656,835 | Increased activity reported by Citywide (Melbourne subsidiary) |
| **Natural Gas VIC (metro) (GJ)** | 1,127,223 | 1,725,230 | Gas consumption within recreation centers significantly decreased due to pool closures |

| | | | |
|---|---|---|---|
| | | | during COVID-19 lockdowns |
| **General waste (municipal waste)** | 1,373,980 | 1,001,549 | Small increase in waste volumes due to business growth. However the emission increase is largely attributed to an increased emission factor (1200kg $tCO_2$-e in FY20 versus 1600kg $tCO_2$-e in FY21). |
| **Water supply and wastewater treatment - Melbourne** | 1,592,059 | 613,691 | Emission factor was 0.885 in FY20 versus 2.46 in FY21, leading to a significant increase in emissions |
| **Working from Home: calculator - Result A - VIC** | 997,386 | n/a | Reported under a separate emission factor in FY21. Had been converted to a $CO_2$-e figure within our environmental data management system prior to importing into Climate Active Inventory. |

## Use of Climate Active carbon neutral products and services

N/A

## Organisation emissions summary

The electricity summary is available in the Appendix B. Electricity emissions were calculated using a market-based approach.

| Emission category | Sum of Scope 1 ($tCO_2$-e) | Sum of Scope 2 ($tCO_2$-e) | Sum of Scope 3 ($tCO_2$-e) | Sum of total emissions ($tCO_2$-e) |
|---|---|---|---|---|
| Accommodation and facilities | - | - | - | - |
| Air Transport (fuel) | - | - | - | - |
| Air Transport (km) | - | - | 3 | 3 |
| Bespoke | 135 | - | - | 135 |
| Carbon neutral products and services | - | - | - | - |
| Cleaning and chemicals | - | - | 73 | 73 |
| Construction materials and services | - | - | - | - |
| Electricity | - | 312 | - | 312 |
| Food | - | - | - | - |
| Horticulture and agriculture | - | - | 34 | 34 |
| ICT services and equipment | - | - | - | - |
| Land and sea transport (fuel) | 3,429 | - | 176 | 3,605 |
| Land and sea transport (km) | - | - | 9 | 9 |
| Machinery and vehicles | - | - | - | - |
| Office equipment & supplies | - | - | - | - |
| Postage, courier and freight | - | - | 264 | 264 |

| | | | | |
|---|---|---|---|---|
| Products | - | - | - | - |
| Professional services | - | - | 288 | 288 |
| Refrigerants | - | - | - | - |
| Roads and landscape | - | - | - | - |
| Stationary energy | 1,758 | - | 119 | 1,877 |
| use for duplicates | - | - | - | - |
| Waste | - | - | 1,487 | 1,487 |
| Water | - | - | 1,592 | 1,592 |
| Working from home | - | - | 997 | 997 |
| **Total** | 5,321 | 312 | 5,043 | 10,676 |

## Uplift factors

A 5 per cent uplift factor has been applied to the emissions total. This upwards adjustment to City of Melbourne's total carbon inventory accounts for relevant emissions, which can't be reasonably quantified or estimated. This conservative accounting approach helps ensure the integrity of the carbon neutral claim.

| **Reason for uplift factor** | **$tCO_2$-e** |
|---|---|
| Uplift to account for non-quantified sources where data is unavailable or where data collection is not cost effective (5%) | 534 |
| *Total footprint to offset (uplift factors + net emissions)* | 11,210 |

# 6.CARBON OFFSETS

## Offsets strategy

The City of Melbourne purchases offsets according to the principles set out in our City of Melbourne Carbon Neutrality Strategy (Council Operations) approved by the Council's Future Melbourne Committee at a meeting held on 17 April 2012:

**Essential principles**

- Compliance with Carbon Neutral Standard
- Social responsibility
- Timeliness

**Important principles**

- Certainty
- Transparency
- Cost effectiveness
- Leadership
- Biodiversity

The City of Melbourne procures offsets at the start of each reporting period. These offsets are held by our offset provider and are then retired upon request at the end of the reporting period, after the inventory has been completed.

| **Offset purchasing strategy: Arrears** | | |
|---|---|---|
| 1. | Total offsets previously forward purchased and banked for this report | 9,827 $tCO_2$-e |
| 2. | Total emissions liability to offset for this report | 11,210 $tCO_2$-e |
| 3. | Net offset balance for this reporting period | 1,383 $tCO_2$-e |
| 4. | Total offsets to be forward purchased to offset the next reporting period | 4,545 $tCO_2$-e |
| 5. | Total offsets required for this report | 11,210 $tCO_2$-e |

## Co-benefits

Our emissions were offset through a variety of projects, which were chosen based on the above principles. All projects generate multiple co-benefits, which are supportive of the United Nations Sustainable Development Goals. The table below provides an overview of the offset projects, their co-benefits, and their alignment to the UN Sustainable Development Goals.

| Table 5. Offset projects and co-benefits | | |
|---|---|---|
| **Project** | **Offsets ($tCO_2$-e)** | **% of CoM inventory** |
| **82 MW Lau Renun Hydro Power Plant, North Sumatra, Indonesia (ID)** | **9,827** | **66%** |
| Renun Hydro Power: Harmoniously increasing energy access by using the power of flowing water. Located on the shores of Lake Toba in a remote part of North Sumatra, the project harnesses the power of the Renun River and its tributaries to generate renewable energy. The grid-connected project displaces energy derived from burning fossil-fuels and therefore avoids the associated greenhouse gases. Many measures have been taken to balance the need for powering local sustainable development with protecting the island's rich natural landscape and vegetation. The project provides job opportunities and training and the project owner has also funded many initiatives to directly benefit the surrounding community.<br><br>The project contributes to the following United Nations Sustainable Development Goals:<br><br>  | | |
| **Bundled Wind Power Project by Mytrah Group, India (IN)** | **928** | **8%** |
| Located at Karnataka and Andhra Pradesh in Southern India, the Mytrah Energy wind project is a large-scale wind farm comprising 156 turbines with total installed capacity of 233 MW. The Project avoids greenhouse emissions through displacing coal-fired electricity generation with renewable wind electricity generation. The key co-benefits associated with this project are social in nature and include increased availability of reliable cost-effective electricity promoting local economic development, improved human health associated with reduced air pollution, increased income and job generating opportunities in a high-tech high skills sector.<br><br>The project contributes to the following United Nations Sustainability Goals:<br><br>  | | |
| **Grouped Hydropower Plants in Chongqing, Yunnan,Sichuan and Guizhou Provinces, P.R.** | **455** | **4%** |
| This project consists of multiple small-scale hydropower plants that generate renewable energy for rural Southwest and South Central China. By supplying clean hydroelectric power to the local grid, the project displaces greenhouse gas emissions, helping mitigate climate change. The project helps to improve the livelihoods of people living in remote and sometimes isolated communities through funding a number of initiatives, including a social fund and sustainable agricultural workshops.<br><br>The project contributes to the following United Nations Sustainability Goals:<br><br>  | | |

## Offsets summary

Proof of cancellation of offset units

| Offsets cancelled for Climate Active Carbon Neutral Certification | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Project description** | **Type of offset units** | **Registry** | **Date retired** | **Serial number (and hyperlink to registry transaction record)** | **Vintage** | **Eligible quantity ($tCO_2$-e)** | **Quantity used for previous reporting periods** | **Quantity banked for future reporting periods** | **Quantity used for this reporting period claim** | **Percentage of total (%)** |
| **82 MW Lau Renun Hydro Power Plant, North Sumatra, Indonesia (ID)** | VCU | VERRA | 3 Jun 2020 | 8245-4602155-4620154-VCS-VCU-842-VER-ID-1-488-01012017-30042017-0 | 2017 | 18,000 | 8,173 | 0 | 9,827 | 88% |
| **Bundled Wind Power Project by Mytrah Group, India (IN)** | VCU | VERRA | 26 Oct 2021 | 5931-267973643-267974490-VCU-034-APX-IN-1-1728-01012016-31122016-0 & 5838-263295362-263295441-VCU-034-APX-IN-1-1728-01012016-31122016-0 | 2016 | 928 | 0 | 0 | 928 | 8% |
| **Grouped Hydropower Plants in Chongqing, Yunnan,Sichuan and Guizhou Provinces, P.R. China** | VCU | VERRA | 26 Oct 2021 | 9407-95959708-95964707-VCS-VCU-785-VER-CN-1-438-28032016-25092016-1 | 2016 | 5000 | 0 | 4545 | 455 | 4% |

| | | |
|---|---|---|
| ***Total offsets retired this report and used in this report*** | | **11,210** |
| ***Total offsets retired this report and banked for future reports*** | **4,545** | |

| Type of offset units | Quantity (used for this reporting period claim) | Percentage of total |
|---|---|---|
| Verified Carbon Units (VCUs) | 11,210 | 100% |

# 7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Melbourne, has signed a 10 year Power Purchase Agreement (PPA) for 100 per cent renewable energy as part of the Melbourne Renewable Energy Project (MREP). Renewable energy which is purchased through this PPA can be treated as zero emissions, as the associated Large-scale Generation Certificates (LGCs) have been surrendered.

The below table provides the certificate numbers which have been voluntarily surrendered with the Clean Energy Regulator Confirmation of Voluntary Certificate Surrender. A function of the electricity contract, which both City of Melbourne and Citywide holds with the PPA provider, has LGCs split across 3 contracts.

- Melbourne City Council
- Melbourne City Council - Engineering & Eng Collective
- Citywide Service Solutions Pty Ltd

Citywide is a wholly owned subsidiary of the City of Melbourne. For the purposes of Climate Active reporting, Citywide is considered a contractor as it is not under City of Melbourne's operational control. A proportion of Citywide's total emissions, as captured under National Greenhouse and Energy Reporting (NGER) boundary, is reported based on the percentage of revenue associated with its service provision to City of Melbourne. In 2020-21 this proportion was 25%. The proportion of LGCs generated through the MREP contract are considered to be attributable to City of Melbourne at the same proportion.

## Renewable Energy Certificate (REC) summary

The following RECs have been surrendered to reduce electricity emissions under the market-based reporting method.

| | |
|---|---|
| **Large-scale Generation Certificates (LGCs)*** | 12,740 |

* LGCs in this table only include those surrendered voluntarily (including through PPA arrangements), and does not include those surrendered in relation to the LRET, GreenPower, and jurisdictional renewables.

| Project supported by LGC purchase | Eligible units | Registry | Surrender date | Accreditation code (LGCs) | Certificate serial number | Generation year | Quantity (MWh) | Fuel source | Location |
|---|---|---|---|---|---|---|---|---|---|
| **Melbourne City Council** | | | | | | | | | |
| Wind Farm | LGC | REC Registry | 30/03/2021 | WD00VC32 | 141920-144685 | 2020 | 2,766 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | 30/03/2021 | WD00VC32 | 221065-223583 | 2020 | 2,519 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | *To be surrender 2022 | WD00VC32 | 64107-67023 | 2021 | 2,917 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | *To be surrender 2022 | WD00VC32 | 95365-98650 | 2021 | 3,286 | Wind | VIC, Australia |
| | | | | | | Melbourne City Council - Total | 11,488 | | |
| **Melbourne City Council - Engineering & Eng Collective** | | | | | | | | | |
| Wind Farm | LGC | REC Registry | 30/03/2021 | WD00VC32 | 144686-144961 | 2020 | 276 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | 30/03/2021 | WD00VC32 | 227706-227959 | 2020 | 254 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | *To be surrender 2022 | WD00VC32 | 51606-51879 | 2021 | 274 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | *To be surrender 2022 | WD00VC32 | 98714-98892 | 2021 | 279 | Wind | VIC, Australia |
| | | | | | | Melbourne City Council - Engineering & Eng Collective - Total | 1,083 | | |
| **Citywide Service Solutions Pty Ltd** | | | | | | | | | |
| Wind Farm | LGC | REC Registry | **Details unavailable | WD00VC32 | 141392-141507 | 2020 | 188 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | **Details unavailable | WD00VC32 | 220922-221064 | 2020 | 143 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | **Details unavailable | WD00VC32 | 57860-58016 | 2021 | 157 | Wind | VIC, Australia |
| Wind Farm | LGC | REC Registry | **Details unavailable | WD00VC32 | 91671-91859 | 2021 | 189 | Wind | VIC, Australia |
| | | | | | | Citywide Service Solutions Pty Ltd - Total | 677 | | |

| | |
|---|---|
| *Citywide is a wholly owned subsidiary that is not under City of Melbourne's operational control. Citywide emissions not associated with City of Melbourne usage have been excluded. City of Melbourne includes 25% of Citywide's emissions (and associated LGCs) as this is the proportion of Citywide's revenue associated with service provision to City of Melbourne* | 169 |
| *Total LGCs surrendered this report and used in this report* | 12,740 |

* LGCs are retired on our behalf through our retail contract. Retailer surrenders in line with date required for compliance Key dates (cleanenergyregulator.gov.au) and Voluntary certificates are in line with these same dates. Date for voluntary for period 2020 was done 30th March 2021 and for period 2021 it will be done in March 2022.

** Citywide is a wholly owned subsidiary that is not under City of Melbourne's operational control. Retirement dates are not available through the public registry.

# APPENDIX A: ADDITIONAL INFORMATION

N/A

# APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions were calculated using a market-based approach. The results of both the market-based and location-based method are presented below for transparency through dual reporting.

**Location-based method**

The location-based method provides a picture of a business's electricity emissions in the context of its location, and the emissions intensity of the electricity grid it relies on. It reflects the average emissions intensity of the electricity grid in the location (State) in which energy consumption occurs. The location-based method does not allow for any claims of renewable electricity from grid-imported electricity usage.

**Market-based method**

The market-based method provides a picture of a business's electricity emissions in the context of its renewable energy investments. It reflects the emissions intensity of different electricity products, markets and investments. It uses a residual mix factor (RMF) to allow for unique claims on the zero emissions attribute of renewables without double-counting.

## Market Based Approach Summary

| Market Based Approach | Activity Data (kWh) | Emissions (kgCO2e) | Renewable Percentage of total |
|---|---|---|---|
| Behind the meter consumption of electricity generated | 592,163 | 0 | 4% |
| **Total non-grid electricity** | **592,163** | **0** | **4%** |
| LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs) | 12,740,278 | 0 | 76% |
| GreenPower | 0 | 0 | 0% |
| Jurisdictional renewables (LGCs retired) | 1,355 | 0 | 0% |
| Jurisdictional renewables (LRET) (applied to ACT grid electricity) | 316 | 0 | 0% |
| Large Scale Renewable Energy Target (applied to grid electricity only) | 3,041,732 | 0 | 18% |
| Residual Electricity | 290,551 | 311,785 | 0% |
| **Total grid electricity** | **16,074,232** | **311,785** | **95%** |
| **Total Electricity Consumed (grid + non grid)** | **16,666,396** | **311,785** | **98%** |
| Electricity renewables | 16,375,845 | 0 | |
| Residual Electricity | 290,551 | 311,785 | |
| **Exported on-site generated electricity** | **0** | **0** | |
| Emission Footprint (kgCO2e) | | 311,785 | |

| | |
|---|---|
| **Total renewables (grid and non-grid)** | **98.26%** |
| **Mandatory** | **18.26%** |
| **Voluntary** | **76.44%** |
| **Behind the meter** | **3.55%** |
| **Residual Electricity Emission Footprint (TCO2e)** | **312** |
| *Figures may not sum due to rounding. Renewable percentage can be above 100%* | |
| *Voluntary includes LGCs retired by the ACT (MWh)* | 1 |

## Location Based Approach Summary

| Location Based Approach | Activity Data (kWh) | Emissions (kgCO2e) |
|---|---|---|
| ACT | 1,672 | 1,505 |
| NSW | 18,804 | 16,924 |
| SA | 0 | 0 |
| Vic | 16,035,291 | 17,478,467 |
| Qld | 16,748 | 15,575 |
| NT | 0 | 0 |
| WA | 0 | 0 |
| Tas | 1,718 | 292 |
| **Grid electricity (scope 2 and 3)** | **16,074,232** | **17,512,763** |
| ACT | 0 | 0 |
| NSW | 0 | 0 |
| SA | 0 | 0 |
| Vic | 592,163 | 0 |
| Qld | 0 | 0 |
| NT | 0 | 0 |
| WA | 0 | 0 |
| Tas | 0 | 0 |
| **Non-grid electricity (Behind the meter)** | **592,163** | **0** |
| **Total Electricity Consumed** | **16,666,396** | **17,512,763** |

| | |
|---|---|
| **Emission Footprint (TCO2e)** | **17,513** |

## Climate Active Carbon Neutral Electricity summary

| Carbon Neutral electricity offset by Climate Active Product | Activity Data (kWh) | Emissions (kgCO2e) |
|---|---|---|
| *Enter product name/s here* | **0** | **0** |

*Climate Active carbon neutral electricity is not renewable electricity. The emissions have been offset by another Climate Active member through their Product certification.*

# APPENDIX C: INSIDE EMISSIONS BOUNDARY

## Non-quantified emission sources

The following sources emissions have been assessed as relevant, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions are accounted for through an uplift factor. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Non-quantified emissions have been assessed as relevant and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor.

| Relevant-non-quantified emission sources | (1) Immaterial | (2) Cost effective (but uplift applied) | (3) Data unavailable (but uplift applied & data plan in place) | (4) Maintenance |
|---|---|---|---|---|
| Purchased goods and services (artists/speaker travel) | Yes | No | No | No |
| Web Hosting & Services | No | No | Yes | No |
| Video/Filming/Photography | No | Yes | No | No |
| Catering | No | No | Yes | No |
| Real Estate Services | Yes | No | No | No |

# APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

## Excluded emission sources

The below emission sources have been assessed as not relevant to the City of Melbourne operations and are outside of its emissions boundary. These emissions are not part of the carbon neutral claim. Emission sources considered for relevance must be included within the certification boundary if they meet two of the five relevance criteria. Those which only meet one condition of the relevance test can be excluded from the certification boundary.

Emissions tested for relevance are detailed below against each of the following criteria:

1. **Size** The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions
2. **Influence** The responsible entity has the potential to influence the reduction of emissions from a particular source.
3. **Risk** The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.
4. **Stakeholders** Key stakeholders deem the emissions from a particular source are relevant.
5. **Outsourcing** The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.

| Emission sources tested for relevance | (1) Size | (2) Influence | (3) Risk | (4) Stakeholders | (5) Outsourcing | Included in boundary? |
|---|---|---|---|---|---|---|
| Citywide (non-CoM contract) | yes | No | No | No | No | No |
| Municipal waste disposal at third party facilities | yes | No | No | No | No | No |
| Animal Management | No | No | No | No | No | No |
| Upstream transportation & distribution | No | No | No | No | yes | No |
| Business travel (regional) | No | No | No | No | No | No |
| Downstream transportation & distribution | No | No | No | No | No | No |
| Processing, use & end of life of sold products | No | No | No | No | No | No |
| Capital goods | No | No | No | No | No | No |
| Investments | No | No | No | No | No | No |
| Community Emissions | Yes | No | No | No | No | No |

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