

CORPORATE EMISSIONS PLAN

2026-2029

Proudly working
with and for
our community



Table of contents

Mayor's Message	03
Introduction	04
Our Responsibilities	05
Achievements to Date	06
Continue the Emissions Reduction Journey	07
Delivery of the Action Plan 2026-2029	14
Glossary	18
References	19

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The City of Ballarat acknowledges the Traditional Owners of the land we live and work on, the Wadawurrung and Dja Dja Wurrung Peoples, and recognises their continuing connection to the land and waterways.

We pay our respects to their Elders past and present and extend this to all Aboriginal and Torres Strait Islander Peoples.

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Mayor's Message

The City of Ballarat is proud to present its *Corporate Emissions Plan 2026–2029*.

As a community, we are at an important moment in our city's sustainability journey.

We have already made significant progress in reducing our corporate emissions in recent years and this plan builds on that momentum as we continue working toward our long-term goal of achieving zero net corporate emissions.

As part of our previous *Carbon Neutrality and 100% Renewables Action Plan 2019–2025*, we implemented major initiatives that are already delivering measurable environmental and financial benefits.

This included transitioning to 100% renewable electricity across our buildings, streetlighting, and key facilities, expanding rooftop solar across our facilities, and capturing methane at the Ballarat Regional Landfill, and the successful \$2.5 million Australian Government grant to support a major heating system upgrade at the Ballarat Aquatic and Lifestyle Centre (BALC).

However, it is vital this work does not stop. And we know the Ballarat community is right behind us.

Engagement during the *Council Plan 2025–2029* process highlighted strong expectations for leadership on sustainability, and this plan helps build on that momentum.

The actions outlined in this plan focus on four key themes:

- improving energy efficiency and electrification across more than 200 City-managed buildings;
- transitioning our fleet to low and zero-emission vehicles;
- reducing landfill impacts and advancing our circular economy;
- and strengthening organisational capability to reduce future carbon liability.

Within these themes there are 28 clear actions that will not only cut emissions but also reduce costs, improve comfort and air quality in our facilities, and support economic opportunities for local businesses and suppliers.

As we look ahead, our responsibility is clear. Tackling climate change requires leadership, collaboration, and continued investment from all levels of government.

To maintain our strong momentum, we will continue to seek opportunities to work with both the Australian and Victorian governments to deliver vital projects that reduce carbon emissions.

Together, we can meet this challenge to create a cleaner, more sustainable future for Ballarat.



Cr Tracey Hargreaves
Mayor, City of Ballarat

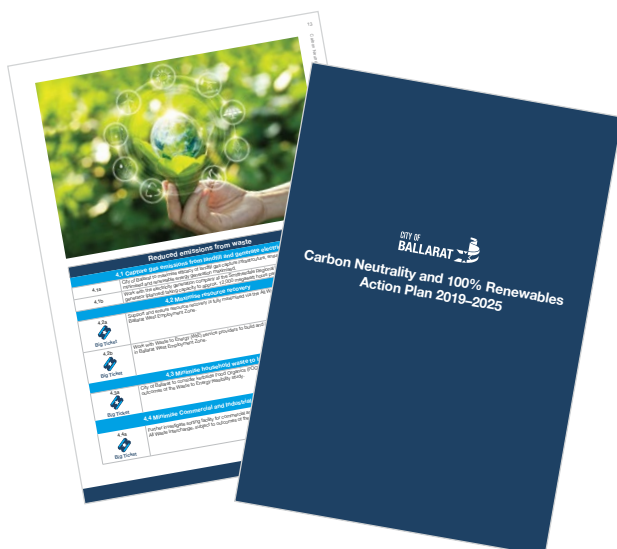
Introduction

The *Corporate Emissions Plan 2026-29* outlines the City of Ballarat's actions towards long-term goals of zero net corporate emissions. The actions will also seek to reduce energy costs and improve thermal comfort in the City of Ballarat's buildings, where relevant.

The City of Ballarat's recent *Council Plan 2025-2029* community engagement, completed in December 2024, indicated that 36% of the respondents wanted the City of Ballarat to be a leader in its sustainability efforts, while over 500 respondents thought urgent action on environmental issues were needed. The 2024 State of Sustainability Report released by Sustainability Victoria shows that a majority of Victorians are concerned about climate change and believe that it is an urgent issue that requires action now.

The Federal Government is focusing on a 43% reduction by 2030 and 62–70% by 2035 as legally underpinned by the Climate Change Act 2022. The Victorian State Government is committed to achieving net-zero by 2045 in *Victoria's 2035 Emissions Reduction Target: Driving Real Climate Action*. To support implementation of these strategies, various incentives, grants, and programs are provided by the federal and state governments to help support local governments to transition council operations and community assets to renewable energy, improve energy efficiency, and foster a circular economy.

The Ballarat Net Zero Emissions Plan was adopted by Council in 2022 for transition to a carbon neutral municipality with an aspirational community-wide target of reaching net zero emissions by 2030.



Background

The Carbon Neutrality and 100% Renewables Action Plan 2019-2025 (Action Plan 2019-2025) was adopted by Council in April 2019 and aimed to provide the pathway for the City of Ballarat to meet its long-term goal of zero net corporate emissions.

The Action Plan 2019-2025 was structured around five outcomes:

- **progressing a culture of sustainability within City of Ballarat.**
- **maximise energy resource efficiency.**
- **100% renewable energy City of Ballarat operations.**
- **reduced emissions from waste.**
- **community carbon emissions reduction.**

The City of Ballarat has undertaken many actions to reduce carbon emissions, from 38,990 tonnes of carbon dioxide equivalent (tCO₂eq) in 2019 to 22,107 tCO₂eq in 2025. The reductions are equivalent to emissions from approximately 960 homes or removing about 6,800 average Australian cars from the road for a year.

Actions undertaken to achieve these reductions included:

- **landfill gas capture system at Ballarat Regional Landfill**
- **renewable electricity power purchase agreement**
- **initiatives to increase renewable energy use and energy efficiency in our buildings, and**
- **incorporating electric vehicles in our passenger pool fleet.**

Besides emissions reductions, the implemented actions have provided the following benefits:

- **reduced energy costs.**
- **increased resource recovery and revenue generation.**
- **improved thermal comfort and indoor air quality in City of Ballarat buildings.**

In the implementation of the Action Plan 2019-2025 there were some challenges faced and key learnings surrounding financial and project planning, adaptability to technological change, and the need to continuously enhance base understanding and knowledge across the organisation. These learnings have been considered in developing this *Corporate Emissions Plan 2026-2029*.

Our Responsibilities

Victorian local governments have legislative obligations in relation to both climate change mitigation and adaptation. The main legislation that informs local government responsibilities are:

- *Local Government Act 2020*.
- *Climate Action Act 2017*.
- *Public Health and Wellbeing Act 2008*.
- *Planning and Environment Act 1987*, including recent amendments and Victorian Planning Provisions.

Local Government Act 2020

The *Local Government Act 2020* outlines several overarching governance principles in Section 9 that Council must give effect to when performing its roles. Section 9(2)(c) stipulates that “the economic, social and environmental sustainability of the municipal district, including mitigation and planning for climate change risks, is to be promoted”.

Climate Action Act 2017

(formerly Climate Change Act 2017)¹

Victoria legislated a net-zero emissions target with the *Climate Action Act 2017*. Under the Act, local governments are obligated to consider climate change in decision-making and actively consider climate change impacts and risks when developing strategies, including those under the *Local Government Act 2020*. Councils are encouraged to submit a voluntary pledge on targets and actions for reducing greenhouse gas emissions from council operations.

Public Health and Wellbeing Act 2008

The *Public Health and Wellbeing Act 2008* requires Councils to prepare a four-year Municipal Public Health and Wellbeing Plan following each Council election (section 26). According to the *Climate Action Act 2017* (previously the *Climate Change Act 2017*), local governments must have regard to climate change when preparing their Municipal Public Health and Wellbeing Plan (section 17 and schedule 1), specifically:

- Potential impacts of climate change relevant to the decision or action (adaptation); and
- Potential contribution to the State’s greenhouse gas emissions of the decision or action (mitigation).

Planning and Environment Act 1987

Under the *Planning and Environment Act 1987*, planning authorities, including local governments, must have regard to the Victorian Planning Provision (VPP).

In June 2022, Amendment VC216 was made to the VPP. The amendment introduces supporting responses to climate change as a key purpose of the VPP and for the first time introduces concepts such as climate change mitigation, adaptation, net zero emissions and renewable energy as key considerations for planning decision-making.

Benefits of emissions reduction

By reducing emissions across assets, practices and communities, the City of Ballarat can:



Reduce operational costs by reducing energy consumption.



Help to limit climate change and reduce the impacts of climate change.



Help residents to reduce their cost of living through reduced energy consumption, lower utility bills and decreased long-term maintenance costs.

Emissions reduction – roles of local government

All sectors and levels of government have a role to play in emissions reduction to ensure a safe climate future. Local governments are considered to have:

- Higher levels of influence over emissions reduction in relation to waste management and planning controls.
- Medium levels of influence in relation to land use, sustainable transport, infrastructure, energy efficiency, behind-the-meter renewable energy, community energy, and purchasing clean energy.
- Lower levels of influence in relation to grid-scale decarbonisation (NSW, 2021).

¹ The Victorian Climate Change Act 2017 was renamed the Climate Action Act 2017 by amendments introduced in the Climate Change and Energy Legislation Amendment (Renewable Energy and Storage Targets) Act 2024, with the title change effective in March 2025.

Achievements to Date

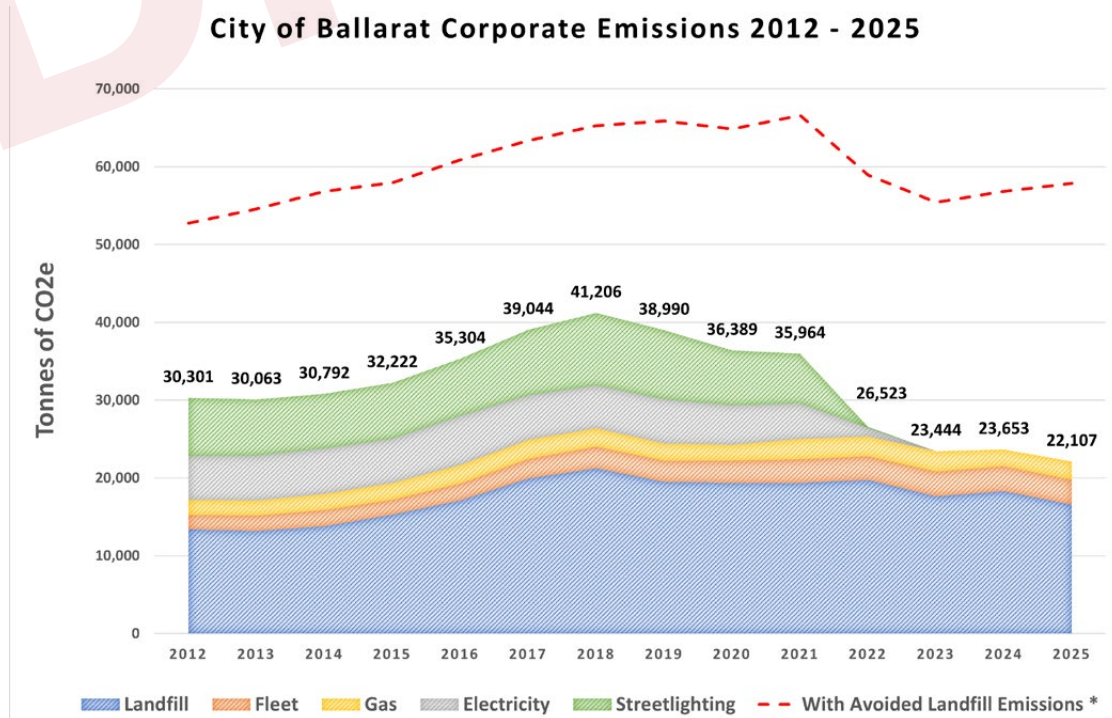
Implementation of the Action Plan 2019–2025 helped to reduce the organisation’s carbon emissions from 38,990 tCO₂eq in 2019 to 22,107 tCO₂eq in 2025.

The key actions undertaken to achieve this were:

- Victorian Energy Collaboration (VECO) power purchase agreement for 100% renewable energy.
- Upgrade of street lighting to Light-Emitting Diode (LED).
- Installation of 460kW rooftop solar installation on a total of 10 City of Ballarat facilities.
- Purchase of over 20 electric vehicles (EVs) including five battery EVs and two plug-in hybrid EVs.
- Methane recovery at the Ballarat Regional Landfill.

Other recent initiatives that will further reduce the emissions beyond 2025 include:

- Installation of an electric heat pump system at Ballarat Aquatic and Lifestyle Centre will have the following benefits:
 - reduce gas consumption by 96%
 - reduce expenditure by \$480,000 annually
 - reduce annual emissions by 1,743 tCO₂eq.
- Implementation of FOGO (food organics and garden organics) collection service will avoid methane emissions of about 1,968 tCO₂eq annually.



* Dashed line indicates what total emissions would be without Landfill Capping and Methane Gas Capture Projects

Continue the Emissions Reduction Journey

Actions in the City of Ballarat Corporate Emissions Plan 2026-2029 were developed through discussions with key staff across a range of areas including Circular Economy, Facilities, Fleet, Landfill, and Waste and Street Cleaning Operations teams within the City of Ballarat. Actions are categorised into four themes as outlined below.

As actions, budgets and timelines are further developed and refined, additional engagement with key staff will occur. Actions will be reviewed annually, taking into account any Federal and State Government policy changes, funding opportunities, technology accessibility and other collaborative opportunities.



Theme 1: Energy Efficiency Improvement and Electrification of City of Ballarat Buildings/Facilities

City of Ballarat is currently responsible for the management and maintenance of more than 200 buildings and facilities with a value of approximately \$490 million. These buildings and facilities range in size, age and use, and include the Town Hall, office buildings, operations depot, transfer station, recreational and sport facilities, libraries, family and children services, community centres, aquatic centres and the animal shelter.

These buildings and facilities use electricity and gas in their operations, which lead to carbon emissions. Several ongoing and planned initiatives including the Victorian Energy Collaboration (VECO) power purchase agreement and electrification of Ballarat Aquatic and Lifestyle Centre will significantly reduce the emissions.

The reduction in emissions in City of Ballarat owned buildings and facilities could be further enhanced through improved efficiency in and decarbonisation of energy use through electrification options and/or renewable energy sources.



Theme 2: Fleet Transition with Fuel-Efficient or Zero-Emission Options

City of Ballarat's fleet vehicles and equipment are used to carry out operations and deliver community services. These activities directly emit greenhouse gases as fossil fuels to power the light and heavy vehicles as well as plant and equipment. City of Ballarat has already begun the transition to zero emission electric passenger pool fleets, and will continue to replace fuel vehicles with electric vehicles where fit for purpose and commercially viable.



Theme 3: Circular Economy and Reduction in Waste Generation and Disposal in Landfills

Ballarat Regional Landfill receives waste from the communities it serves. It is under the City of Ballarat's operational control and therefore its emission is included in our corporate emissions profile. The landfill gas capture and other landfill management measures at Ballarat Regional Landfill and closed landfills have been reducing, and will continue to reduce, methane emissions.

These efforts will be further enhanced through the 'Waste as a Resource – Our Circular Economy' Strategy. The Strategy provides a practical framework for the City of Ballarat and the community working together to reduce waste and support transition to a circular economy.



Theme 4: Organisational Transition and Collaboration for Tackling Future Carbon Liability

City of Ballarat will undertake all feasible emissions reduction actions to minimise the need for carbon offsetting activities to cancel out our remaining emissions. These include the residual direct emissions that could not be fully avoided from our activities as well as other indirect emissions that occur in the City of Ballarat's value chain but within our sphere of influence.

Efforts are needed to reduce potential exposure to future carbon liability and high risk of increasing offset costs. These efforts, either individually or collaboratively, comprise strengthening sustainable procurement, implementing carbon drawdown and exploring carbon offset approaches.



THEME 1: Energy Efficiency Improvement and Electrification of City of Ballarat Buildings/Facilities

Action	Emissions Reduction Potential ²	Complexity in Implementation	Resources ³	Other Benefits	Timeline	Lead / Partners	Monitoring and Evaluation
1.1 Energy (electricity) assessments to identify and then implement energy efficiency measures to reduce utility costs in City of Ballarat buildings (including those leased and operated by third parties).	Medium 	Medium • Technology availability; • Financial resources; • Community engagement.	Officer Time (0.02 FTE); \$\$\$ Grants	Reduced energy costs; Improved thermal comfort	2026-2028	Sustainable Environment; Facilities; Recreation Services; Family, Youth and Children Services; Libraries and Lifelong Learning; Major Projects	Reduced electricity consumption
1.2 Continue assessment of gas usage in City of Ballarat buildings, including those leased and operated by third parties, to support a longer-term transition to gas-free operations.	Low 	Low • Technology availability; • Financial resources; • Community engagement.	Officer Time (0.02 FTE); \$\$\$ Grants	Reduced energy costs; Improved thermal comfort; Better indoor air quality	2026-2028	Sustainable Environment; Facilities; Recreation Services; Family, Youth and Children Services; Libraries and Lifelong Learning	Reduced gas consumption
1.3 Assess and upgrade current sporting light tower globes for energy efficiency and ensure new facilities use low emission globes.	Low 	Medium • Financial resources.	Officer Time (0.04 FTE); \$\$\$ Grants	Reduced energy costs	2026-2029	Recreation Services; Sustainable Environment	Reduced electricity consumption
1.4 Continue the replacement of all low-efficiency public lighting with high efficiency or LED lights.	Low 	Medium • Financial resources.	Officer Time (0.02 FTE); \$\$\$	Reduced energy costs	2026-2027	Infrastructure; Sustainable Environment	Reduced electricity consumption

2. Emission reduction potential: Low = < 50tCO₂e; Medium = 50-100tCO₂e; High = > 100tCO₂e; NA: insignificant or no direct impact

3. \$ = < \$30,000; \$\$ = \$30,000 - \$300,000; \$\$\$ = > \$300,000

Officer time: Estimated annual FTE from Sustainable Environment Team only

Action	Emissions Reduction Potential ²	Complexity in Implementation	Resources ³	Other Benefits	Timeline	Lead / Partners	Monitoring and Evaluation
1.5 Support development of new buildings and facilities that incorporate zero emissions design, build and appliance selection and without gas connection (in line with the Sustainable Capital Works Procedure and Guidelines).	Low 	High • Technical capability; • Technology availability; • Financial resources.	Officer Time (0.04 FTE); \$\$\$	Reduced energy costs; Improved thermal comfort; Better indoor air quality	2026-2029	Sustainable Environment; Major Projects	Reduced electricity consumption Reduced gas consumption
1.6 Continue the purchase of all electricity used by City of Ballarat buildings from 100% renewable energy through VECO and/or other similar arrangements.	High 	Medium • Technical capability.	Officer Time (0.02 FTE)	Reduced energy costs	2028-2029	Sustainable Environment; Property; Procurement	Reduced electricity consumption
1.7 Continue exploring opportunities to install solar PV on City of Ballarat buildings and assets.	Low 	Low • Financial resources.	Officer Time (0.04 FTE); \$\$	Reduced energy costs	2026-2029	Sustainable Environment	Total solar capacity; Reduced electricity consumption
1.8 Continue exploring opportunities and implementing energy storage projects when funding is available.	Low 	Medium • Financial resources • Technical capability.	Officer Time (0.08 FTE); Grant funding	Reduced energy costs	2026-2029	Sustainable Environment	Total battery storage capacity; Reduced electricity consumption
1.9 Explore local renewable sources and offset opportunities.	NA	High • Community engagement. • Technical capability; • Financial resources.	Officer Time (0.08 FTE); Grant funding	Reduced energy costs	2027-2029	Sustainable Environment	Total renewable
1.10 Develop and distribute communication materials on energy efficiency and renewable energy to create behaviour change among internal and external stakeholders.	NA	Low • Technical capability; • Community engagement.	Officer Time (0.02 FTE); \$	Reduced energy costs; Improved thermal comfort	2027	Sustainable Environment	Number of stakeholders

THEME 2: Fleet Transition with Fuel-Efficient or Zero-Emission Options

Action	Emissions Reduction Potential	Complexity in Implementation	Resources	Other Benefits	Timeline	Lead / Partners	Monitoring and Evaluation
2.1 Continue updating fleet policies to ensure priority on highly fuel-efficient vehicles for all fleet types.	NA	Medium Technology availability;	Officer Time (0.02 FTE)	Lower running costs; Reduced noise pollution; Improved air quality	2026 -2029	Fleet	Number of EV; Reduced fuel consumption
2.2 Continue progressive end-of-life replacement of all City of Ballarat's light vehicle fleet with electric vehicles where fit-for-purpose are available.	Low 	Medium Financial resources	\$\$\$	Lower running costs; Reduced noise pollution; Improved air quality	2026-2029	Fleet	Number of EV; Reduced fuel consumption
2.3 Investigate options and costs to transition heavy fleet away from fossil fuels with electric or low emission options and implement the replacement when commercially available.	Low 	Medium Financial resources	Officer Time (0.04 FTE); \$\$\$	Lower running costs; Reduced noise pollution; Improved air quality	2027-2029	Fleet; Sustainable Environment; Waste and Street Cleaning; Operations	Number of EV; Reduced fuel consumption
2.4 Investigate and implement electrical alternatives to diesel and petrol small plant and equipment for operations.	Low 	Medium Financial resources	Officer Time (0.04 FTE); \$\$\$	Lower running costs; Reduced noise pollution; Improved air quality	2027-2029	Fleet; Sustainable Environment; Waste and Street Cleaning; Operations	Number of EV; Reduced fuel consumption
2.5 Continue the installation of EV charging stations at City of Ballarat owned sites and powered by renewable energy.	NA	High - Technical capability; - Financial resources;	Officer Time (0.08 FTE); \$\$\$	Lower running costs	2026-2028	Sustainable Environment; Fleet	Locations installed with EV charger; Total EV chargers

Action	Emissions Reduction Potential	Complexity in Implementation	Resources	Other Benefits	Timeline	Lead / Partners	Monitoring and Evaluation
2.6 Carry out staff training and education activities to improve fuel efficiency in driving.	NA	Medium • Technology availability;	Officer Time (0.02 FTE)	Lower running costs; Reduced noise pollution; Improved air quality	2026 -2029	Fleet	Number of EV; Reduced fuel consumption
2.7 Support the development of infrastructure for public EV charging and low emission/active transport.	NA	Medium • Community engagement. • Technical capability; • Financial resources;	Officer Time (0.08 FTE)	Improved air quality; Support to local economy	2027-2029	Sustainable Environment; City Design	Number of EV chargers in Ballarat

THEME 3: Circular Economy and Reduction in Waste Generation and Disposal in Landfills

Action	Emissions Reduction Potential	Complexity in Implementation	Resources	Other Benefits	Timeline	Lead / Partners	Monitoring and Evaluation
3.1 Support the delivery of the 'Waste as a Resource: Our Circular Economy Strategy', including reducing kerbside waste generation, enhancing FOGO program and increasing circular economy initiatives.	High 	High - Community engagement. - Financial resources;	Officer Time (0.04 FTE)	Cost savings; job creation; resource recovery; Less pollution	2026-2029	Circular Economy; Sustainable Environment	Less waste disposed at the landfill; Reduced landfill emissions.
3.2 Continue the landfill gas capture and renewable energy generation and reporting at Ballarat Regional Landfill.	High 	Low Technical capability;	Officer Time (0.02 FTE)	Revenue generation; improved air quality; resources recovery; renewable energy	2026-2029	Landfills and Transfer Station	Reduced landfill emissions; Renewable energy generation
3.3 Continue the use and regular update of the NGER solid waste calculator for estimating landfill gas emissions and recording capture performance.	NA	Low Technical capability;	Officer Time (0.08 FTE)		2026-2029	Sustainable Environment; Landfills and Transfer Station	Annual emissions reporting
3.4 Continue careful management of the landfill cover and capping, including regular surface monitoring at the landfill and respond quickly to any identified hotspots.	NA	Low - Financial resources; - Technical capability;	Officer Time (0.02 FTE)	Improved air quality; resources recovery	2026-2029	Landfills and Transfer Station	Reduced landfill emissions
3.5 Continue monitoring, management and reporting of gas wells and field layouts to ensure performance of landfill gas capture systems.	NA	Low - Financial resources; - Technical capability;	Officer Time (0.02 FTE)	Improved air quality; resources recovery	2026-2029	Landfills and Transfer Station	Reduced landfill emissions

THEME 4: Organisational Transition and Collaboration for Tackling Future Carbon Liability

Action	Emissions Reduction Potential	Complexity in Implementation	Resources	Other Benefits	Timeline	Lead / Partners	Monitoring and Evaluation
4.1 Continue to review and strengthen sustainable procurement and tender processes with the use of products, technologies and services that minimise direct and indirect emissions.	Medium 	High - Financial resources; - Technology availability;	Officer Time (0.08 FTE)	Reduced energy costs; less pollution	2027-2028	Sustainable Environment; Procurement	Reduced emissions.
4.2 Collaborate with other local governments and organisations to support low/zero emissions products and services.	NA	Medium - Technical capability; - Financial resources;	Officer Time (0.02 FTE)	Reduced energy costs; less pollution	2027-2029	Sustainable Environment	Reduced emissions.
4.3 Support the expansion of urban forest canopy through the delivery of Ballarat Urban Forest Action Plan.	NA	Low Financial resources;	Officer Time (0.02 FTE)	Improved air quality; less pollution; urban cooling	2026-2029	Sustainable Environment	Reduced emissions.
4.4 Partner with Traditional Owners' organisations to support delivery of Biodiversity Strategy including developing and implementing landscape and ecosystems regeneration initiatives	NA	Low - Community engagement; - Financial resources;	Officer Time (0.08 FTE)	Improved air quality; less pollution	2027-2029	Sustainable Environment	Reduced emissions.
4.5 Explore the opportunities and support the implementation of environmental planting on private lands locally and regionally.	NA	High - Community engagement; - Financial resources;	Officer Time (0.08 FTE)	Improved air quality; less pollution	2027-2028	Sustainable Environment	Reduced emissions.
4.6 Collaborate with other local councils, regional networks and other stakeholders to explore and develop local and regional carbon offset scheme and climate actions/ projects.	NA	Medium - Technical capability; - Financial resources;	Officer Time (0.02 FTE)	Improved air quality; less pollution	2026-2029	Sustainable Environment	Reduced emissions.

Delivery of the Action Plan 2026–2029

Funding

Funding for actions will be subject to the City of Ballarat's annual and capital budgeting processes, with the cost of resourcing many actions wrapped into existing operational budgets. Some actions may also rely on grant or state or federal government funding to fulfill. The City of Ballarat will take a proactive approach to applying for external grant opportunities and advocacy to support or enhance implementation of relevant actions.

Evaluation and Reporting

Progress on actions will be reported to Council annually along with industry trends. Where possible, progress towards meeting objectives and completing actions will be measured in a quantitative manner.

The key indicators include the following:

- Emissions level (tonne carbon dioxide equivalent, tCO₂eq)
- Electricity consumption (kilowatt-hour, kWh)
- Gas consumption (gigajoule, GJ)
- Fleet fuel consumption (litre, L)
- Landfill emissions (tonne carbon dioxide equivalent, tCO₂eq)
- Cost savings (\$)



Victorian Energy Collaboration (VECO) power purchase agreement for 100% renewable energy

The City of Ballarat is one of 60 councils participating in the Victorian Energy Collaboration (VECO) to power municipal offices, leisure centres, streetlights and community buildings with cheaper, cleaner renewable energy. VECO supplies participating councils with 100% renewable electricity from two wind farms in Victoria through a 9.5-year contract since 2021. All participating councils are expected to benefit financially and environmentally from the initiative. In FY 2024, the City of Ballarat reduced energy costs by \$146,147 and cut our emissions by 8,610 tCO₂eq.

Installation of LED Streetlighting

Delivered in partnership with the Central Victorian Greenhouse Alliance and other regional councils, the multi-year initiative replaced streetlights in the municipality with more energy efficient LEDs. Since 2021 the upgrading works were progressively implemented on streetlights across the minor and major road networks. It was projected to result in cumulative net savings of \$22.3 million dollars over 20 years and avoided greenhouse gas emissions over 50,000 tCO₂eq over the same period.

Rooftop solar installation on the City of Ballarat facilities

Solar power capacity on the City of Ballarat's facilities was doubled since 2019 to over 600kW in 2025. Total solar generation of these systems at 15 facilities is estimated to be about 700 MWh annually and saving over \$100,000 per year in electricity costs. An additional 200kW will be installed at Ballarat Aquatic & Lifestyle Centre (BALC) in 2026, generating around 260 MWh of energy annually, meeting up to 18 per cent of BALC's annual electricity needs.



Transition of the City of Ballarat Fleets with Electric Vehicles

Since 2022 the City of Ballarat's pool vehicles have been progressively replaced with EV options. These include 5 battery EVs and 2 plug-in hybrid EVs. The replacement of these fleets led to a reduction of fossil fuel consumption of 500-600 litres annually.

Methane recovery at the Ballarat Regional Landfill

The landfill gas capture and renewable energy generation at Ballarat Regional Landfill was expanded in 2019 in collaboration with LMS Energy. With two 800kW on-site engines, 4.47 million m³ of methane (equivalent to 1,800 Olympic sized swimming pools) is combusted, generating about 13,500 MWh power (equivalent to powering about 2,800 average Victorian homes annually). Total emissions abated is about 96,000 tonnes of CO₂ equivalent (equivalent to removing about 38,700 average Australian cars from the road for a year). The initiative generated a royalty payment of \$249,000 in 2023/2024.



BALC Heat Pump

The City of Ballarat is investing \$5.2 million, together with \$2.5 million grant from the Australian Government, to implement a major heating system upgrade at the Ballarat Aquatic and Lifestyle Centre (BALC). This transformative project will see the installation of an eco-friendly heat pump system, dramatically reducing gas consumption, emissions, and operational costs at one of the region's largest community facilities. The upgrade will replace the centre's aging gas boilers with state-of-the-art heat pump technology, significantly cutting gas use by 96 per cent, which will reduce greenhouse gas emissions by 1,743 tonnes annually.

Utility fees are a significant component of the annual running costs. The project is expected to generate operational savings of \$480,000 per year, achieving a return on investment within about 10 years and net savings of \$2.1 million by year 15.

The new system will use high efficiency air-source and water-source heat pumps to provide heating across BALC's five indoor pools and three pool halls. Additionally, the project will lay the foundation for future energy-efficient upgrades, including centralised cooling and dehumidification systems, which would further improve the comfort of visitors, as well as reducing operating costs even further.

FOGO collection service

Implementation of FOGO (food organics and garden organics) collection service will avoid methane emissions of about 1,968 tCO₂eq annually (equivalent to emissions from approximately 112 homes for one year) and provide a compost product that will be used by the City of Ballarat Parks and Gardens teams in city beautification and environmental restoration works. The FOGO collection will reduce the volume of waste going to landfill by approximately 3,200 tonnes per annum.



Glossary

Adaptation

Adjustments in ecological, social, or economic systems in order to reduce or avoid potential damages or to benefit from opportunities associated with climate change.

Carbon neutral

Condition in which greenhouse gas emissions associated with an organisation, product or service are balanced by similar amount of removals.

Carbon offset

Action intended to compensate greenhouse gas emissions into the atmosphere.

Carbon sequestration (or drawdown)

The long-term storage of carbon in plants, soils, geologic formations and the ocean.

Environmentally Sustainable Design (ESD)

Practices that ensure a building is thermally comfortable while providing efficient and cost saving measures against rising energy, water and waste disposal costs, as well as helping to protect the natural environment, be it biodiversity, air and waterways.

Mitigation

Actions that either reduce emissions of greenhouse gases or remove those gases from the atmosphere.

Net Zero Emissions

Condition in which greenhouse gas emissions associated with an organisation, product or service have been reduced where possible and compensated for the remainder by investing in carbon removals.

Reference

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All information correct at time of publication.