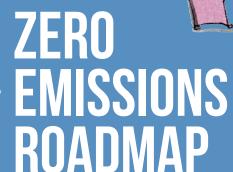






ZERO















SCHOOL STRIKE + Climate!















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Our Partners at the launch of the Collaboration in June 2022

ACKNOWLEDGEMENT OF COUNTRY

Acknowledgement of Country

The City of Greater Bendigo is on Dja Dja Wurrung and Taungurung Country. We acknowledge and extend our appreciation to the Dja Dja Wurrung and Taungurung People, the Traditional Owners of the land.

We pay our respects to leaders and Elders past, present and future for they hold the memories, the traditions, the culture and the hopes of all Dja Dja Wurrung and Taungurung Peoples.

We express our gratitude in the sharing of this land, our sorrow for the personal, spiritual and cultural costs of that sharing and our hope that we may walk forward together in harmony and in the spirit of healing.

Acknowledgement of First Nations People

The City recognises that there are people from many Aboriginal and Torres Strait Islander communities living in Greater Bendigo.

We acknowledge and extend our appreciation to all First Nations Peoples who live and reside in Greater Bendigo on Dja Dja Wurrung and Taungurung Country, and we thank them for their contribution to our community.



WORKING WITH TRADITIONAL OWNERS ON CLIMATE ACTION

Dja Dja Wurrung

DJAARA's (Dja Dja Wurrung Aboriginal Clans Corporation) vision, as set out in their Climate Change Strategy (released in May 2023), is a sustainable, resilient and equitable future where past injustices of colonialism, mining and pollution are addressed by empowering Djaara (Dja Dja Wurrung people) led responses to climate change on Djandak (Dja Dja wurrung country) through self-determination, energy justice and biocultural knowledge. Djaara climate action focuses on healing People, healing Country and healing Climate based on the principle of People-Country-Climate being connected through Spirit.

Applying modern technologies like solar and wind energy, batteries and energy efficiency techniques will support healing. Nyauwi Mutjeka 'to keep the sun' is

the Dja Dja wurrung's Renewable Energy Strategy and outlines Djaara's aspirations to partner with companies, government, and others on the clean energy transition and ensure benefits for Djaara and the whole community.

Walking together to heal People, Country and Climate.



CEO STATEMENT OF INTENT

Our organisations are proud to have shaped the Greater Bendigo Climate Collaboration and the Greater Bendigo 2030 Zero Emissions Roadmap. We are committed to delivering this Roadmap for our local environment, community and economy and to play our part in solving the climate crisis globally. Please join us!



Damian Wells

MD, Coliban Water

Marnie Baker

MD / CEO, Bendigo and Adelaide Bank

Agnico Eagle

RACV Solar

Brad Drust

CEO, North Central CMA

Jason Russell

CEO, CVGT Employment

Professor Susan Dodds

Acting Vice-Chancellor, LaTrobe University Bendigo

Anjum Chaudry

President, Bendigo Sustainability Group **Nicola Duncliff-Wells**

President, Bike Bendigo

Ken Rookes

ACF Community Bendigo District

Michelle Murphy

CEO, Bendigo Foodshare

Rodney Carter

CEO, Dja Dja Wurrung Group

Rob Herbert

CEO, Be.Bendigo

Annika Kearton

EO, Central Victorian Greenhouse Alliance

Craig Neimann

CEO, City of Greater Bendigo

THE ROADMAP ON A PAGE

Why?

A Liveable Climate

A better Greater Bendigo

How?

Collaboration

Equity

Local economy



What?



Electrify everything

Support homes and businesses to get off gas, become energy efficient and install solar power.



Transport revolution

Prioritise active travel, buses and the train and accelerate the transition to electric vehicles.



Protect and enhance nature

Deliver Council's Biodiversity Strategy.



Sustainable food

Support zero carbon farms and urban/peri-urban local food production.



Circular economy

Support homes and businesses to eliminate the concept of waste. Support reprocessing of resources locally.

The Greater Bendigo Climate Collaboration

The Greater Bendigo Climate Collaboration (the Collaboration) is designed to bring our city together for three years of climate action, education, planning and projects to put our City on the path to zero emissions by 2030.

In 2018, world-leading environmentalist Paul Hawken visited Bendigo to talk about climate change and its likely impacts. His address ignited a local desire for collective action on climate. Consequently, representatives 20 Bendigo businesses, organisations, community groups and local and state government set about designing, creating and financing the Greater Bendigo Climate Collaboration. The Collaboration was launched in July 2022.

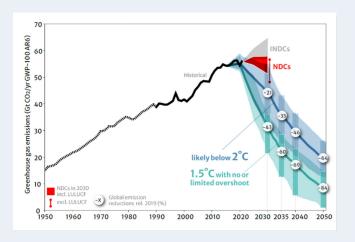
Collaboration partners

The Collaboration is being hosted and led by the City of Greater Bendigo. Funding partners are RACV Solar, Agnico Eagle, Bendigo and Adelaide Bank, La Trobe University, Coliban Water, North Central Catchment Management Authority, CVGT Employment.

Community collaborating partners are the Bendigo Sustainability Group, Bendigo Australian Conservation Foundation (ACF), Bike Bendigo and Bendigo Foodshare.

Be.Bendigo, Bendigo Youth Council, the Department





of Energy, Environment and Climate Action and Dja Dja Wurrung Corporation are supporting the Collaboration on the governance group.

The need for change

Climate science is the largest scientific undertaking in human history, with thousands of scientists from hundreds of countries working together over 60 years of data collection, analysis and debate. There is no doubt in the scientific community that climate change is real, is happening and is caused by us. Global temperatures are rising, sea levels are rising and extreme weather events are increasing. We have over 30 years of data since the first IPCC report in the 1990s that show climate science has accurately predicted the changes that have occurred over that time. Their predictions over the next 76 years show that failing to reduce greenhouse gases to zero well

before 2050 will have devastating impacts on our way of life.

The United Nations Intergovernmental Panel on Climate Change recently released its 6th Assessment Report AR6 – Synthesis Report – Climate Change 2023. The report clearly states that this decade is our last chance to meet our 1.5-degree target and that we require an immediate, rapid and drastic drop in greenhouse emissions to prevent 3 degrees of warming.

The chart above, released September 9 2023 shows historical emissions from 1950 (black line), projected emissions in 2030 based on nationally determined contributions (shown in red), and emission reductions required by the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (shown in blue and teal).

We are currently falling well short of our 1.5°C goal.

The impacts of climate change are clear in 2023, despite global temperatures having risen just 1.2 degrees since 1880. This year we have seen the hottest ocean temperatures, largest Arctic and Antarctic sea ice and Greenland ice melting and the hottest July on record. We have seen record land temperatures in Europe (Italy, Spain and Greece), bushfires (across Europe, Canada and the USA) and floods (China, India, Pakistan and South Korea). An El Nino is very likely to be declared in 2023, meaning we are likely to be in for a hot, dry, summer.

The situation is dire, but not irreversible.

Did you know?

A 2°C RISE IN GLOBAL
TEMPERATURES WOULD REDUCE
ECONOMIC OUTPUT IN
THE NEXT FOUR DECADES BY
BETWEEN \$ 135 BILLION AND \$423
BILLION IN TODAY'S TERMS.

(Australian Government Intergenerational Report, August 2023)

The Earth's climate will stabilise when we stop burning fossil fuels. Every kg of carbon not emitted matters.



Greater Bendigo municipal emissions profile

According to the most accurate data we have available, the municipality's direct emissions were approximately 1,515,000 tCO2e in 2021/22 (or 12 tCO2e/resident/year).



Figure 1: City of Greater Bendigo municipal emissions 2021/22. Source: Snapshot tool, Ironbark Consulting

Another way to breakdown this emissions profile is:

- Businesses 44% of emissions (excluding transport)
- Households 23% of emissions (excluding transport)
- Transport 18% of emissions

Population and Emissions

The population of Greater Bendigo in 2021 was 122,551. Population forecasts suggest that by 2050 there will be 200,000 people living in Greater Bendigo. Reducing carbon emissions to zero whilst adding 1.6 times the population requires a clear plan and investment, education, advocacy and follow through. It creates an even greater need to act fast.

Indirect or scope 3 emissions

The Snapshot tool does not include embodied emissions that were created outside Greater Bendigo to create the goods that we buy and consume. Whilst they are almost impossible to quantify, this September 2021 report from the ACT, "Scope 3 Emissions in the ACT" provides an approximate per capita figure for Victoria of 22 tCO2e/capita/year which, when adjusted for our population ~122,551 suggests that the emissions from our consumption add a further ~2,600,000 tCO2e to our total municipal emissions.

This situation will improve as global supply chains and manufacturers are using more renewable energy and are electrifying transport and generally reducing their own impact. However, current consumption in Greater Bendigo is likely to be adding more than 1.5 times the emissions that the Snapshot chart opposite shows.

This demonstrates the importance of supporting businesses and homes to eliminate the concept of waste; to reduce consumption, to buy more climate friendly products and to support the reuse, repair, recycling and reprocessing of resources in our region.

Community and stakeholder engagement

The GBCC launched in July 2022 and has since engaged with over 1,000 people at community forums, stakeholder workshops and meetings to find out what the people and organisations of Bendigo think we should do to create a zero emissions city.

Forums and workshops were held with stakeholders from the energy, transport, circular economy, agriculture and carbon offsets. An interfaith group was bought together, a climate justice and equity group formed and community groups consulted. Our team met with multicultural groups, rotary, youth organisations, business groups, neighbourhood houses and partner organisations. Meetings were held with staff inside The City of Greater Bendigo and with transport, regional development and climate change state government departments.

A Regional Climate Forum was held in Castlemaine to receive ideas and feedback from over 150 people from across Central Victoria.

The draft Roadmap was then prepared and released for community consultation. It was the main focus of the Greater Bendigo Climate Summit held on May 27, 2023, which attracted 670 attendees.

During the consultation phase the team held listening posts and workshops with partner organisations at the Bendigo and Kangaroo Flat libraries and at

our neighbourhood houses. The City's Let's Talk consultation platform was also used for a month to receive feedback from 47 people online.

During consultation, 47 community members voted on their preference of projects, with three of the top five being transport related and all of them equity related. The top five priority projects were:

- Advocate for a complete overhaul of the City's bus services to get people to work and school effectively
- Accelerate development of footpaths and traffic calming initiatives to make the City pedestrian friendly
- Establish a program to support low-income households with the energy transition, including providing financial support or no interest loans
- Establish a Home Energy Efficiency and Resilience Service that provides home energy assessments and supports residents to electrify and retrofit their home
- 5. Accelerate development of **cycling lanes** and infrastructure in the City.

Following the consultation period, community feedback was included and this final Roadmap prepared.



WHAT'S IN THE ROADMAP

This roadmap looks at how we can best transform our city to zero emissions by 2030, in energy, transport, circular economy, agriculture and natural systems. The 35 priority projects were chosen because they are the actions we can take together as a City. The advocacy positions are the actions we need support with from the State and Federal governments.

What we found at the Greater Bendigo level is threefold:

- Collaboration is crucial: We need a decade of serious collaboration, advocacy and investment that builds on the great work happening already at all levels of government, in business and in the community. While progress is being made in every sector, we are not progressing fast enough to reach zero emissions by 2030.
- We must focus on an equitable transition: This
 was a unanimous view across Greater Bendigo.
 Transport, energy and food choices need to be
 available to everyone and these choices can lower
 the cost of living.
- A zero emissions city is better in every
 way: It is a social and economic investment
 in a better future. If we invest now, we will be
 healthier, happier, more socially connected, more
 economically prosperous and more able to adapt
 to climate changes that are already locked in.

This roadmap lays the pathway to a much better Bendigo in a timescale that can help to create a habitable climate. Now to make it happen, together.

Part 1: The Roadmap

Includes the City's 35 priority projects that will be delivered in partnership with many local organisations.

Part 2: Appendix of all ideas

A table that lists all the ideas we received in the development of the Roadmap.

Resources:

It is assumed that the City of Greater Bendigo will continue to lead the actions listed in the Roadmap through the Greater Bendigo Climate Collaboration or other relevant departments. It is also assumed that partner organisations will continue to financially support the Climate Collaboration from 2024-2030.

Funding:

Not all projects are currently funded. Most are under development and are not fully costed. Where additional Council funding is required, this will be sought through Council's annual budget process, and state and federal government grants and programs.

\$: Requires human and / or financial resources up to \$100,000.

\$\$: Requires human and / or financial resources of \$100,000 to \$500,000.

\$\$\$: Requires human and / or financial resources of over \$500,000.



WORKING TOGETHER

The community wants

- Action across government, industries and sectors.
- Support for community led action.
- Organisations to work together, including with Traditional Owners.
- The scale of actions to increase commensurate with climate science targets

What's happening already

- A number of active community organisations focused on environmental action including Bendigo Sustainability Group, Bike Bendigo, Bendigo Climate Alliance, Australian Conservation Foundation (ACF) – Bendigo Branch, Bendigo and District Environment Council, the Bendigo Repair Cafe and numerous Landcare and Friends groups.
- Local coordination and collaboration through the Greater Bendigo Climate Collaboration.
- Regional coordination and collaboration through development of the Regional Zero Emissions Roadmap.

The problem

- Collaboration takes time and resources.
- Community organisations are often under-resourced and susceptible to burn out.
- Creating zero emissions homes and organisations is much harder alone

The strategy

Maintain an active culture of collaboration and support across organisations and sectors.



THEMES	PRIORITY ACTIONS	RESOURCES
Working together	Continue the Greater Bendigo Climate Collaboration Continue the Collaboration and seek collective funding for projects as needed.	\$\$ annually
	2. Partnerships Continue to actively seek out opportunities to collaborate with other agencies and organisations and to collectively resource organisations such as the Bendigo Sustainability Group, Central Victorian Greenhouse Alliance, Bike Bendigo and DJAARA to deliver programs that progress shared priorities.	Existing
	3. Local community leadership and action Support local initiatives that build community-based climate leadership and action. This may include education, schools, engagement or art programs that target different demographics and / or neighbourhood and township scale climate action planning	\$
	4. Regional Zero Emissions Roadmap Continue to work with the Central Victorian Greenhouse Alliance and other stakeholders to finalise and implement the Regional Zero Emissions Roadmap currently in development.	Existing
	5. Dja Dja Wurrung self determination Support and help resource DJAARA to deliver their Climate Change Strategy and Renewable Energy Strategy and to participate fully in climate action on Djandak, including in participating in the actions in this Roadmap.	TBC

\$ = up to \$100k; \$\$ = \$100k to \$500k; \$\$\$ = over \$500k.

WORKING TOGETHER

We will advocate for...

- Federal and State Government funding for community and business education and leadership programs.
- Federal or State Government funding for the Greater Bendigo Climate Collaboration to continue.
- Federal and State Government funding to support regional governance and collaborative projects.

We will measure and report on ...

- Number of partnerships and community leadership actions established.
- Progress implementing Roadmap actions



"

"WE CAN'T IMPOSE OUR WILL ON A SYSTEM. WE CAN LISTEN TO WHAT THE SYSTEM TELLS US AND DISCOVER HOW ITS PROPERTIES AND OUR VALUES CAN WORK TOGETHER TO BRING FORTH SOMETHING MUCH BETTER THAN COULD EVER BE PRODUCED BY OUR WILL ALONE."

Donella Meadows, Thinking in Systems

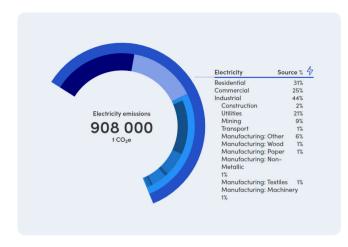
Did you know?

THE GREATER BENDIGO CLIMATE COLLABORATION WON A "HIGHLY COMMENDED" AWARD AT THE CLIMATE COUNCIL'S 2023 CITIES POWER PARTNERSHIPS CLIMATE AWARDS IN THE COLLABORATION CATEGORY.

(Cities Power Partnerships Program Climate Awards)

Emissions profile

Electricity makes up 60% of our Greater Bendigo emissions, with one third being residential emissions. As the national power grid is fast becoming powered by renewable energy, this percentage will drop rapidly in the next decade.



Gas makes up 7% of our Greater Bendigo emissions. Across its lifecycle, gas has the same impact on the climate as coal.



The current targets

- National: 80% renewable energy by 2030.
- State: 95% renewable energy by 2035. No new gas connections by 2024.
- Local: 50% renewable energy, no new gas connections, 40% of households and businesses have solar by 2026.

The community wants

- Equitable outcomes, including funding mechanisms to support low-wealth households.
- Support for households and businesses to transition – i.e. education, support with grants and financial incentives.
- Changes to existing regulations which can be a barrier to innovation.
- The end to tax breaks and government funding for fossil fuel industries. The Australia Institute estimates that in the 2021/22 year, the Australian Government provided \$11.6B to subsidise the fossil fuel industry.
- Businesses powered by renewable energy, including potentially through small scale solar farms.

What's happening already

- Reinstatement of the State Electricity Commission.
- Investment in large scale offshore wind and highcapacity transmission lines – i.e. Victoria to New South Wales Interconnector West (which will now avoid Greater Bendigo)
- Federal election promise to fund solar gardens and community batteries.
- The Victorian Government announced that new homes requiring a planning permit will be required to be all-electric from 1 January 2024. This means new homes and residential subdivisions that require a planning permit cannot connect to the gas network.
- Bendigo Sustainability Group revolving energy fund and Giving Power program to fund retrofits of low income homes.
- Bendigo Sustainability Festival run by the Bendigo Sustainability Group.
- The Electrify Everything movement is demonstrating that installing solar and electric appliances will save the average home \$3000 a year by 2030.
- In the 2023/4 Federal Budget \$1.6 billion in funding was announced for electrification for low-income homes, energy upgrades for social housing and business incentives for electrification.
- DJAARA Climate Change Strategy and Renewable Energy Strategy.



The problem

Housing

Our housing stock is performing poorly:
 Approximately 50% of Greater Bendigo homes were built before 1990. A Sustainability Victoria study found that these homes average 1.6 Energy Stars. Approximately 20% were built 1990-2004 and according to the same study, these homes average 3.1 stars. 30% were built after 2004 and were built to, but do not necessarily perform to 5 or 6 star standard.



- Only 28.2% dwellings have rooftop solar in Greater Bendigo.
- In the 2021 census there were ~44,000 Greater Bendigo homes, most of which need upgrading to reach zero emissions. 13,211 households (1/3) are "low wealth". Of these, 10,840 are rented

- where residents need to negotiate upgrades with landlords and 1,747 are social housing.
- Existing grant programs can be difficult to navigate, especially for people with low digital literacy.
- Many households want to transition, however they do not have time or the upfront funds to take action now.

Did you know?

SWITCHING TO ELECTRIC VEHICLES AND APPLIANCES, COMBINED WITH IMPROVED ENERGY EFFICIENCY MEASURES, COULD SAVE AN AVERAGE HOUSEHOLD AS MUCH AS \$2250 PER YEAR.

(CSIRO Report 2023)

Business

 Commercial and Industrial emissions from electricity are 69% of the total and are spread relatively evenly across over 8,200 businesses. The top 15 emitting businesses in Greater Bendigo make up 20% of the emissions from electricity.



energy use, costs and production.

Local small scale solar farms

Community solar farms require significant government funding, transmission and regulatory support.

The power grid

Whilst significant funding is going towards the VNI West transmission lines to connect the national renewable energy grid, our local grid needs strengthening to reach 100% renewable energy and to support local renewable energy economic development.

Gas

Most current buildings have gas connected, gas appliances are still being sold and the transition requires financial planning and assistance.

The strategy

- 1. Electrify Everything: homes and businesses
- 2. Accelerate the transition to renewable energy and energy efficiency for homes and businesses
- 3. Leave no one behind



THEMES	PRIORITY ACTIONS	RESOURCES
Electrify homes	6. Community engagement Deliver an engagement program in collaboration with the Bendigo Sustainability Group that builds awareness of how to electrify homes and access renewable energy.	\$ annually
	7. Sustainable Design Advisory Service Investigate delivery of sustainable design advice and engagement to home owners and the building and construction industry.	TBC
	8. Funding mechanisms Work with lenders to develop and promote low and no interest loans, mortgage-based products and other financial mechanisms to help fund retrofitting initiatives.	Existing
	9. Low-wealth homes electrification and retrofitting Codesign and deliver a financially sustainable, ongoing program with welfare agencies to finance, support, electrify and retrofit low-income homes.	TBC
	10. Home Energy Efficiency and Resilience Service Investigate implementation of a pilot project working with the CVGA, Bendigo Sustainability Group, neighbourhood houses, CVGT Employment, Bendigo TAFE, DJAARA and Mens Sheds to retrofit homes for energy efficiency and climate resilience while building skills in energy assessments and trades	\$\$
	11. Bulk buy programs Work with the CVGA and / or the Bendigo Sustainability Group to implement a bulk buy program for renewable energy and / or electric appliances prioritising programs that deliver savings to residents.	\$

Dr Jarra Hicks from the Community Power Agency on the benefits of community ownership at our Energy Forum in August 2022

ENERGY: ELECTRIFY EVERYTHING

THEMES	PRIORITY ACTIONS	RESOURCES
Electrify businesses	12. Business support program Support businesses to create and implement their own zero emissions roadmaps to install solar, electrify and become energy efficient.	\$ annually
	13. Big business collaboration Bring together Bendigo's big businesses to collaborate on large scale solar and power purchase agreements.	Existing
Building community wealth	14. Community Wealth Fund Investigate establishing an independently managed fund to receive and democratically allocate funds from partners, donors and local renewable energy projects	Existing
	15. Community Benefit Sharing Policy Establish a policy that sets out Council and the community's expectations for benefit sharing outcomes from renewable energy developments.	Existing
Electricity network	16. Collaboration with Powercor Continue to develop a collaborative relationship with Powercor to enable Council and the community to create a 100% renewable energy grid.	Existing

\$ = up to \$100k; \$\$ = \$100k to \$500k; \$\$\$ = over \$500k.

We will advocate for...

Electricity network and regulations

- Upgrades to the state and local distribution and transmission networks to cater for the City's generation capacity and growing electricity needs.
- Changes to regulations to enable businesses and households to set up microgrids to share power with neighbours (front of the meter energy sharing).
- Allow businesses to install larger inverters to export more power to the grid.
- Government funding and regulatory support to encourage community solar farms.

Fossil fuels

- Remove all tax incentives for fossil fuels and establish taxation structures that discourage fossil fuel use and encourage renewable energy.
- No new fossil fuel projects to be built in Australia.
- Phase out all existing fossil fuel projects by 2050.

Building and planning regulations

- Existing housing stock: all homes for lease and sale to require a Residential Efficiency Scorecard rating by 2026.
- The National Construction Code 2026 for all new houses to be 8 star NatHERs rating and be net zero by 2030.
- Seek joint funding for design advisors to support Environmentally Sustainable Development



principles in new homes and renovations.

 The Victorian Government to establish statewide planning policies that preference infill and medium density development over green field development.

Low wealth and social housing

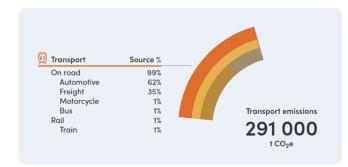
- All new social housing to be net zero by 2030, all electric, solar powered and energy efficient.
- All current social housing to be net zero by 2040, all electric, solar powered and energy efficient.
- Funding to support low wealth households to electrify and improve the energy efficiency of their homes.

We will measure and report on ...

- The percentage of solar power in the Greater Bendigo grid from Powercor data
- The number of rooftops with solar power installed from Australian government data
- The number of energy efficient appliances installed through the Victorian Energy Upgrade program
- · Electricity and gas emissions from Snapshot
- The progress of individual projects and advocacy work

Emissions profile

Transport makes up 18% of our emissions in Greater Bendigo. As the electricity grid becomes increasingly powered by renewable energy, transport will become our number one source of emissions.



The current targets

- National: N/A. Vehicle Emissions Standards planned for late 2023.
- State: 50% of new light vehicles will be electric by 2030, all new public bus purchases will be zero emissions by 2025, active transport will make up 25% of trips by 2030.

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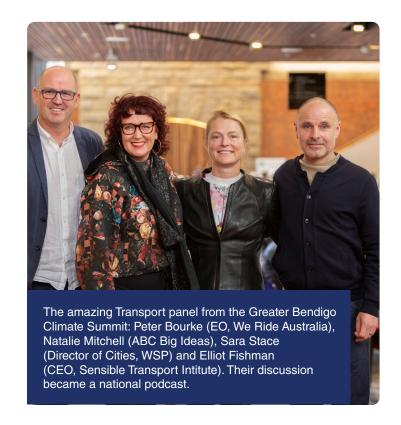
 Local: 1/3 trips are by active transport, 1/3 by public transport and 1/3 by electric vehicles by 2030.



- Integrated walking, cycling, public transport and electric vehicle infrastructure and the associated land use changes.
- A City that is walking and cycling friendly.
- Cycling lanes that are connected and separated from cars.
- A new commuter bus network that is affordable, fit for purpose, direct, safe, frequent and appealing.
- More frequent trains in and around Greater Bendigo to enable commuting to and from Bendigo
- More electric vehicle charging stations.
- An electric vehicle bulk buy.
- Incentives for electric vehicles.

What's happening already

- National Electric Vehicle Strategy in development.
 Vehicle emissions standards will be enacted at the end of 2023.
- Victorian Government Transport sector emissions reduction pledge.
- Delivery of the Walk Cycle Greater Bendigo Strategy and 10-year Infrastructure Plan underway with targets for the strategic protected walking and cycling network of 13.6km complete by 2026 and 81.6km by 2036.
- The Bike Bendigo community group are advocating effectively for cycling infrastructure and behaviour change.



- Cities across Europe are demonstrating that the benefits of investment in active travel and public transport is economically effective, creates positive health outcomes and more vibrant public places with increased levels of local trade.
- The Healthy Loddon Campaspe partnership is supporting active travel across the region with programs aimed at schools and equitable access to walking and cycling.
- The City of Ballarat participated in a year-long trial of an e-scooter "micro-mobility" scheme, which has produced promising results in a similar regional Victorian city.

The problem

A city with no transport choice: cars

- The City is dominated by wide, fast roads which are difficult to cross and feel unsafe for cyclists and pedestrians. Residents of Greater Bendigo do not currently have a choice to the car.
- Bendigo has 122,000 people and 80,000 cars. If this rate of car use is maintained, by 2050 we will have 200,000 people and 140,000 cars. Without intervention, the number of cars in the City is set to almost double. Electric or not, this would cause social, environmental, health and economic issues. We should aim for an average of one car per household.
- 95% of trips to work are by car. This equates to approximately 24,000 car trips to and from the City Centre every day.
- Residents are habituated to driving which requires culture change.
- Governments at all levels are spending the vast amount of transport funding on roads for cars which leads to more cars being driven, which leads to adverse health outcomes and extra spending on public health. Every km driven by car costs society 17 cents. Society gains 18 cents for each km cycled. Yet walking and cycling infrastructure is currently viewed as an extra cost.
- In Greater Bendigo most of our suburban streets have speed limits of 50km/hr. Research by the Journal of the Australasian College of Road Safety in 2017 found that 30km/h speed limits on

- local residential streets could reduce our national road toll by 13 per cent. Our Greater Bendigo suburban streets are very wide, which encourages faster driving and increases the cost of road maintenance.
- Many of Bendigo's suburbs are low density
 which does not support walking, cycling or costeffective delivery of public transport. Developing
 medium density housing in established areas is
 not financially feasible in many cases

Transport and Equity

 The average petrol car costs \$10,000 per year in Australia. Electric cars are currently even more expensive. Active travel is free and accessible to all and public transport should also be affordable accessible to all. The most equitable transport solutions are active travel and public transport.

Did you know?

ANNUAL VEHICLE EMISSIONS IN
AUSTRALIA MAY CAUSE 11,105
PREMATURE ADULT DEATHS, 12,210
CARDIOVASCULAR HOSPITALISATIONS
AND 6,840 RESPIRATORY
HOSPITALISATIONS.

(Melbourne Climate Futures)

Active Travel:

- to school, resulting in around 14,000 car trips in peak times. 86% of school children would like to walk or ride. Around one third of the traffic at peak times is for school trips. The number one reason parents do not want their children walking or riding to school is danger from cars.
- Funding the City's priority separated cycling network will be a challenge - costed at approximately \$130M.
- Achieving the Victorian Government's active travel target will be a challenge unless suitable funding is allocated.
- Research clearly shows that painted, on road cycling lanes increase cycling by around 5% and separated lanes by over 50%. Bendigo has one separated cycling lane on Ellis St in Flora Hill.

Public Transport

- The public transport network does not meet the community's needs – it does not allow the numbers of people to travel where they need to go in the timeframes and at the times they need to travel. It is not a viable alternative to a car for nearly all trips.
- We are currently funding two separate bus systems. One a poorly used city service and another operated by the Education Department to transport students to and from school. We could have one bus system that supported everyone to travel to work and school.

 The number one impediment to employment for job seekers in the City is lack of access to good public transport.

Electric Vehicles

- Electric cars currently make up 5% of sales in Australia and are currently too expensive for most residents.
- Fit for purpose zero emissions heavy vehicles are still in development and are not cost effective yet.
- Electric vehicle charging infrastructure is lagging behind demand.
- E-bikes are growing in popularity. They allow more people to ride and increase the distance people ride by a factor of four.
- Community e-scooters schemes are proving successful and will likely be an option in Greater Bendigo in the near future.

The strategy

- Change the City Footpaths and cycling paths everywhere, not just in priority locations.
 Electric vehicle charging at homes, offices and in strategic public locations.
- 2. Change the services revolutionise the bus system and increase train services.
- 3. Change what's normal normalise active and public travel and electric vehicles. Ensure everyone has transport choices
- 4. Change the spending: prioritize active travel and public transport and resource the change at the scale required

Actions to reach zero emissions

THEMES	PRIORITY ACTIONS	RESOURCES
Active travel	17. Cycling revolution Accelerate implementation of the City's separated cycling network and develop an approach to filling in the network with a suite of temporary and permanent on-road paths, "greenways" and end of trip and parking facilities.	\$\$\$
	18. Walking revolution Accelerate the City's program of walking infrastructure, including footpaths, crossings and traffic calming interventions, that transform car dominated roads into pedestrian prioritised and friendly streets. Special focus on pedestrian priority around every school, park and shopping centre.	\$\$\$
Public transport	19. Bus revolution Advocate for an overhaul of the City's bus services with the aim of delivering a rapid transit system that is direct, frequent, safe, electric, replaces thousands of car trips daily and integrated with walking and cycling.	See 24
	20. Metro rail commute Advocate for a frequent Bendigo metro rail commuter service an hour each side and inside Greater Bendigo.	See 24
Electric vehicles	21. Electric vehicle charging Develop a policy that establishes Council's approach to supporting installation of charging infrastructure in strategic locations. Consider installing Council owned charging infrastructure if and when the business case is favourable.	Existing
	22. Electric vehicle bulk buy Investigate delivery of a bulk buy program for the community in collaboration with the CVGA, the Bendigo Sustainability Group and other stakeholders.	Existing



THEMES	PRIORITY ACTIONS	RESOURCES
Electric vehicles	23. Fleet and logistics collaboration Bring organisations in the city together to investigate opportunities for collaboration relating to the purchase and sharing of fleet, e-bikes, plant, freight and commercial electric vehicles.	Existing
Resources	24. Integrated Sustainable Transport Planner and Programs Officer Establish a role in Council to lead strategic action, integrated transport planning, advocacy and behaviour change programs with schools and workplaces.	\$ annually

\$ = up to \$100k; \$\$ = \$100k to \$500k; \$\$\$ = over \$500k.

We will advocate for...

General

 Government policy and City design to decrease the number of cars on our roads, even as our population increases. This includes reviewing funding policies and programs to increase funding to walking, cycling and public transport.

Active travel

 National and state funding to implement the full Greater Bendigo Walking and Cycling Strategy in ten years. The strategy requires at least \$130million to complete.

Public Transport

A complete overhaul of the City's bus services
 i.e. a review of the approach, the routes and timetables – to facilitate a dramatic increase in

bus patronage, especially for commuting.

- Increased train services that support commuter use in and around Bendigo.
- Two train tracks between Bendigo and Melbourne.

Electric Vehicles

- Encourage the introduction of e-scooter micromobility schemes to Greater Bendigo.
- Improved national fuel emissions standards.
- Introduction of a target for all new passenger vehicles sold to be electric by 2035.
- All fleet vehicles from all levels of government to be electric by 2030.
- Support for businesses to transition to electric or zero emissions trucks for long haul and last mile delivery.



Did you know?

A COPENHAGEN STUDY IN 2011 FOUND THAT SWITCHING A CAR TRIP WITH A 20MINUTE CYCLING COMMUTE OVER 20 YEARS SAVES \$100,000, CUTS 94 TONNES OF C°2 AND INCREASES LIFESPAN BY SEVEN YEARS

(Our Cities Ourselves Report)

Bike Bendigo President Nicola Duncliffe-Wells at our Sustainable Transport Forum in October 2022

TRANSPORT REVOLUTION

We will measure and report on ...

- Annual Super Tuesday and Sunday walking and cycling count data
- Four year census journey to work data
- Four year census car ownership data
- Four year COGB Active Living Census data
- Department of Transport State Government public transport Myki data
- Google real time data on transport modes (TBC)
- Electric vehicle sales data
- Walking/cycling shared path counter data
- Snapshot transport data
- Progress of individual projects
- Organisational e-bike salary sacrifice data
- COGB Active Travel Survey



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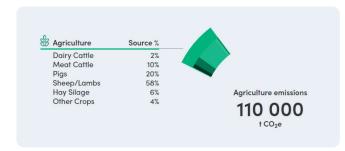
"AT FIRST PEOPLE REFUSE TO BELIEVE THAT A STRANGE NEW THING CAN BE DONE, THEN THEY BEGIN TO HOPE IT CAN BE DONE, THEN THEY SEE IT CAN BE DONE — THEN IT IS DONE AND ALL THE WORLD WONDERS WHY IT WAS NOT DONE CENTURIES AGO."

- Frances Hodgson Burnet

SUSTAINABLE FOOD AND AGRICULTURE

Emissions profile

The agriculture sector makes up 7% of our Greater Bendigo emissions. Embedded or hidden emissions from the food we consume that is produced elsewhere is not included in this figure.



The current targets

- National: Australia has signed the United Nations "Methane Pledge" to reduce methane emissions by 30% below 2020 levels by 2030.
- State: N/ALocal: N/A
- Meat and Livestock Australia: Carbon neutral by 2030.

The community wants

- Extension officers to support farmers to emission reductions, implement regenerative practices and access the carbon market.
- · Advice from neutral and trustworthy sources.
- · Opportunities for Traditional Owner growing.
- Long term funding and policy clarity

What's happening already

- Victorian Government Agriculture Sector Emissions Reduction Pledge
- Healthy Landscapes: Practical Regenerative Agricultural Communities Program delivered across Bendigo, Hepburn and Macedon councils.
- Greater Bendigo Food Systems Strategy 2020-2030
- Numerous regenerative agriculture groups active across Central Victoria.
- The Australian Government's Carbon Farming
 Outreach Program which seeks to fund an
 advisory service that supports farmers understand
 their emissions profile and emission reduction and
 carbon farming opportunities.
- Bendigo Foodshare food redistribution and local, equitable food production organisation
- Community of Practice and sector-based pilot emission profiles being developed by Agriculture Victoria
- Grow it Local Platform delivered locally by Healthy Loddon Campaspe.
- Increasing consumer access to local foods



in several forms, and at several price points, including the Grower Market (Old Church on the Hill and Bendigo Food Share), Farmers Market, several community supported agricultural enterprises and locally owned butchers, fruiterers, green grocers and bakeries.

The problem

- According to Coliban Water, inflows to our water storages are down 53% over the last 25 years. This ongoing trend will continue to challenge our primary production and urban food enterprises to adapt.
- Farmers are not sure how to account for their emissions, are overwhelmed by information and do not know which sources of information to trust.
- Regenerative practices are increasing, however mainly amongst small scale livestock farmers.
 There is less take up amongst large scale farmers and cropping and horticulture industries.
- Urban communities are disconnected from food production.
- Farmers markets and other local and urban food suppliers are small scale, are less affordable and accessible than supermarkets who do not necessarily source their fresh food locally.
- Land owners are disconnected from sustainable traditional owner approaches to managing land that heals Country.

SUSTAINABLE FOOD AND AGRICULTURE

The strategy

- 1. Scale up and expand take up of regenerative, urban and peri-urban agriculture.
- 2. Provide integrated support to farmers collaborate with other agencies on programs that foster sustainable land management, emission reductions and access to carbon markets.
- 3. Increase the community's connection to where their food comes from.



Actions to reach zero emissions

THEMES	PRIORITY ACTIONS	RESOURCES
Agriculture	25. Sustainable Farming Systems Build on the successes of the Healthy Landscapes program and similar regenerative agriculture initiatives in the region and work with key partners to expand programs to other council areas and sectors, including exploring a partnership with DJAARA and employing additional extension officers	\$ annually
	26. Sustainable Land Management Grants Provide small grants to farmers to implement regenerative, sustainable farming techniques.	\$ annually*
	27. Net Zero carbon farms program Work with Agriculture Victoria, NCCMA and other relevant stakeholders to expand their Community of Practise and deliver an advisory service that coordinates with other local and regional programs to support farmers account for and reduce their emissions.	\$ annually
	28. Agribusiness Officer Maintain Council's Agribusiness Officer role to run capacity building programs support young farmers to enter the industry and provide the conduit for information to farmers and the community.	\$ annually
Urban food	29. Food waste business programs Deliver a food waste reduction program targeting businesses including farms, retail and hospitality.	\$\$
	30. Urban food production Support and promote existing programs that increase local food growing and food literacy, such as community gardens, food redistribution programs, backyard and communal growing and school engagement. Investigate establishing an "edible streets" pilot program that involves supporting a street or neighbourhood to install edible gardens and swap produce.	\$\$

\$ = up to \$100k; \$\$ = \$100k to \$500k; \$\$\$ = over \$500k. *proposed for funding in Council's draft 2023/24 budget.

SUSTAINABLE FOOD AND AGRICULTURE

Did you know?

PURCHASING LOCALLY GROWN
PRODUCE IS NO MORE EXPENSIVE
THAN FOOD GROWN OUTSIDE
THE REGION. THERE ARE ALSO
ADDITIONAL BENEFITS ASSOCIATED
WITH CONSUMING LOCALLY GROWN
PRODUCE, SUCH AS REDUCED
FOOD MILES, SUPPORT OF LOCAL
RETAILERS AND FARMERS, FRESHER
PRODUCE, AND THE ABILITY TO EAT
SEASONALLY.

(Healthy Loddon Campaspe Report 2023)

We will advocate for...

- Additional funding for extension officers to work directly with farmers and farmer capacity building programs and networks.
- Further funding to support the growth of urban food growing, logistics and selling initiatives.
- Peak bodies to provide leadership on climate action including the promotion of regenerative agriculture, zero emissions farming, farm energy efficiency, farm electrification, zero emissions food processing and distribution.
- Government organisations to buy local, regeneratively produced food.

We will measure and report on ...

- Snapshot Agriculture data
- Grow it Local Platform data
- Progress and impact of individual projects
- % of Sustainable Land Management Grant funds which are allocated
- Number of grant recipients who implement additional sustainable land management changes on their properties
- % of farm rated properties that have participated in the Healthy Landscapes or a similar extension program

"

"OUR PURPOSE IS - WITH
PASSIONATE COMMITTED
VOLUNTEERS AT OUR HEART,
WE'RE WORKING TOGETHER WITH
PARTNERS AND COMMUNITY TO
CONNECT PEOPLE TO HEALTHY,
AFFORDABLE FOOD BY IMPROVING
LOCAL SUPPLY AND ACCESS,
DEVELOPING FOOD SKILLS AND
SUPPORTING A SUSTAINABLE AND
HEALTHY ENVIRONMENT"

Bendigo Foodshare

NATURE

Emissions profile

Our forests in Greater Bendigo absorb carbon and need to be protected and enhanced. Land use is a minor contributor to Greater Bendigo's emissions, contributing 1,000 tonnes CO2-e per annum.

The current targets

- National: Threatened Species Action plan pledge to protect 30% of land for conservation.
- State: Net gain in the overall extent and condition of habitats
- Local: Increase in tree cover by 35% from 2016 baseline by 2036 no patch of native vegetation over 20ha is fragmented.

The community wants

- Protection of our current trees and forests as carbon stores.
- Increased tree cover across the Greater Bendigo
- Biodiversity corridors and links across Greater Bendigo, including waterways, roads, nature strips and front gardens.
- Local carbon offsets that are legitimate, have integrity and do not absolve organisations from reducing their emissions to near zero.

What's happening already

- Australia's Strategy for Nature 2019-2030
- Protecting Victoria's Environment Biodiversity 2037

- North Central Regional Catchment Strategy
- Galk-galk Dhelkunya, DJAARA
 Forest Gardening Strategy
- Victorian BushBank program which proposes to restore
 20,000 hectares of private land.
- Greater Bendigo Biodiversity
 Strategy and Action Plan 2024-2034
- North Central Catchment Management Authority "Growing Habitat for Net Zero" carbon offsets program.
- Undertaking substantial tree planning as a part of implementation of Greening Greater Bendigo

The problem

- A number of carbon offset projects and accreditation schemes have been discredited.
- Australia's Emissions Reduction Fund is difficult to engage with and is not fit for purpose.
- Carbon offsets are often purchased in place of emissions reduction.

The strategy

- 1. Protect the remnant native vegetation we have left.
- 2. Offset emissions as a last resort.
- 3. Keep carbon offsets local.



THEMES	PRIORITY ACTIONS	RESOURCES
Carbon offsets	31. Local carbon offsets program Work with the NCCMA and other partners such as DJAARA, to establish a local carbon offsetting program that achieves local biodiversity, cultural and economic outcomes.	\$ \$
Biodiversity	#32. Greater Bendigo Biodiversity Strategy Finalise and implement the Greater Bendigo Biodiversity Strategy that seeks to protect and enhance native vegetation across the City.	Existing and as outlined in the Biodiversity Strategy

\$ = up to \$100k; \$\$ = \$100k to \$500k; \$\$\$ = over \$500k.



NATURE

We will advocate for...

- Changes to the Emissions Reduction Fund to ensure it has integrity, is accessible and easy to engage with and supports projects that achieve urban greening and biodiversity co-benefits.
- Protection, enhancement and extension of conservation areas including covenanted land and state and national parks.
- Other organisations to invest in local revegetation programs to offset emissions that cannot be eliminated.

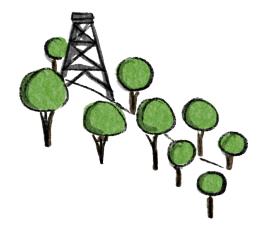
We will measure and report on ...

- % of the City's 2030 residual carbon emissions that will be offset by biodiverse revegetation projects established through the NCCMA's Community Carbon
- Implementation of the Biodiversity Strategy and associated Biodiversity Monitoring Program

"

"WHEN YOU GO OUT THERE INTO THE WILDERNESS YOU DON'T GET AWAY FROM IT ALL, YOU GET BACK TO IT ALL. YOU COME HOME TO WHAT IS IMPORTANT. YOU COME HOME TO YOURSELF."

Peter Dombrovskis



CIRCULAR ECONOMY

Emissions profile

Emissions from our landfill make up 3% of our Greater Bendigo Emissions.



Note: Hidden alongside our landfill emissions however, are the embodied, or hidden emissions generated elsewhere from the goods we buy and the materials businesses require to operate. Putting this in context, based on a UNSW report commissioned by the ACT Government, Greater Bendigo emissions from the consumption of goods, could be up to 2.7m t.CO2e/a. These emissions are in addition to those from energy use.

The current targets

- National: Reduce waste by 10% per person by 2030; recover 80% of waste by 2030; phase out problematic and unnecessary plastics by 2025; reduce organic waste to landfill by 50% by 2030.
- State: Reduce waste by 15% per person by 2025; reduce organic waste to landfill by 50% by 2030; divert 80% of waste from landfill by 2025.
- Local: Zero recoverable resources sent to landfill by 2036.

The community wants

- Increased waste education programs, including programs for CALD communities.
- Support for community waste reduction initiatives.
- Organics collections for hospitality venues.
- Education programs that encourage reduced consumption
- Circular economy industries.

What's happening already

- National Waste Policy and Action Plan
- National Plastics Plan
- Recycling Victoria: A new economy
- Victorian Government Waste sector emissions reduction pledge
- Circular Economy (Waste Reduction and Recycling) Act 2021
- Victorian Container Deposit Scheme commencing in 2023
- City of Greater Bendigo Circular Economy and Zero Waste Policy
- Circular Greater Bendigo tenders for recycling different waste streams and establishment of a Circular Economy Hub
- Regional circular economy scan. An analysis of regional material use and products and identification of 10 key, implementable circular

- economy opportunities across the Loddon-Mallee and Loddon-Campaspe region.
- Aspire platform. Support for use of a reuse and materials sharing platform by businesses in the region.
- Commercial organics collection
- Gas recovery at Eaglehawk Landfill to generate electricity.
 - Recycle Shops at Eaglehawk Landfill, Strathfieldsaye Transfer Station and Heathcote Landfill, and various community enterprises such as the Bendigo Repair Café, Bendigo Toy Library and the Neighbourhood Collective Australia enterprises; the Old Church on the Hill Community Pantry and the Civic Wardrobe.

Did you know?

FOR EVERY RED BIN FULL OF STUFF THAT WE PUT OUT ON THE KERB, 70 BINS OF WASTE WAS CREATED UPSTREAM TO MAKE THAT STUFF.

(Story of Stuff, 2004)

CIRCULAR ECONOMY

The problem

- Embedded emissions in products we consume are "hidden" and not well understood by consumers. Reducing consumption has a far bigger impact than recycling. Reducing consumption and use of primary materials also represents are far more complex challenge than the already difficult shift from fossil-fuels sources to renewable energy sources.
- Community organisations are under-resourced to scale up their circular economy projects.
- Most commercial/industrial and construction/ demolition resources are currently going to landfill.
- Legacy emissions from landfill can be reduced, but not eliminated.

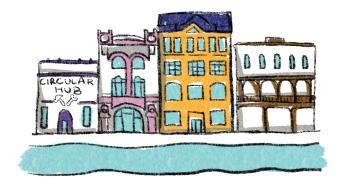
The strategy

- 1. Establish Circular Economy Hubs for commercial and community enterprises.
- 2. Reinforce the waste hierarchy reduce, reuse, recycle.

Actions to reach zero emissions

THEMES	PRIORITY ACTIONS	RESOURCES
Circular Economy	33. Support community circular economy enterprises Support local community circular economy enterprises with small grants and in-kind support to help them scale their impact.	\$\$
	34. Greater Bendigo Circular Economy Hub Finalise design and secure funding to develop a regional Circular Economy Hub to collect, sort and reprocess commercial and industrial resources, and enable local reprocessing enterprises to form.	\$\$\$
	35. Resource Recovery Action Plan Develop and implement a Resource Recovery Action Plan that continues to support the community, businesses and schools to reduce waste and consumption.	Existing

\$ = up to \$100k; \$\$ = \$100k to \$500k; \$\$\$ = over \$500k.



The Green Magpies green team from Epsom Primary School telling the Greater Bendigo Climate Summit Youth Session about the brilliant work they are doing.

CIRCULAR ECONOMY

We will advocate for ...

- Allocation of the Sustainability Fund which receives money from landfill levies to circular economy projects in each municipality and / or local carbon offset projects that assist with offsetting residual landfill emissions that cannot be eliminated.
- Changes to taxation structures to disincentivise virgin/primary materials and incentivise recycled materials/products
- Government mandates (at all levels) to commit to buying 'reused or recycled first' to create demand for recycled products.
- Phasing out of single use items, including single use plastics.
- Government funded education programs that encourage reduced consumption.
- Support for regional solutions to waste materials, increasing regional ownership of the problem and reducing dependency on processors in metropolitan Melbourne.
- Stricter standards on refrigerants that reduce their climate emissions to zero.

We will measure and report on ...

- Tonnes of waste collected across all waste streams from Council facilities
- % of recoverable waste from Council facilities diverted from landfill (or contamination rate)

- Tonnes of waste collected across all waste streams from the community per capita.
- % of recoverable waste diverted from landfill (or contamination rate)

"

"WE SEE A WORLD OF ABUNDANCE, NOT LIMITS. IN THE MIDST OF A GREAT DEAL OF TALK ABOUT REDUCING THE HUMAN ECOLOGICAL FOOTPRINT, WE OFFER A DIFFERENT VISION. WHAT IF HUMANS DESIGNED PRODUCTS AND SYSTEM THAT CELEBRATE AN ABUNDANCE OF HUMAN CREATIVITY, CULTURE, AND PRODUCTIVITY? THAT ARE SO INTELLIGENT AND SAFE, OUR SPECIES LEAVES AN ECOLOGICAL FOOTPRINT TO DELIGHT IN, NOT LAMENT?"

- Michael Braungart, Cradle to Cradle

CLIMATE CHANGE ADAPTION

This Roadmap focuses on emission reduction initiatives that will enable Greater Bendigo to achieve zero emissions by 2030. In other words, mitigation, rather than adaptation. We cannot adapt to climate change without reaching zero emissions. A 4-6 degree warmer world is not one that supports adaptation. In the meantime, the climate is already changing. Building Greater Bendigo's resilience and adaptive capacity is critical to the health and wellbeing of people and the environment. This section provides a brief overview of our approach to supporting climate adaptation while acknowledging that more detailed planning and community engagement is required on this topic to inform future action planning.

What's happening already

- Coliban Water is implementing its program to deliver net zero emissions water supply and treatment by 2030.
- National Climate Resilience and Adaption Strategy
- Building Victoria's Climate Change Resilience
- Victorian Government Adaption Action Plans
- ADAPT Loddon Mallee
- Loddon Mallee Climate Change and Health Framework
- Victorian Drought Resilience and Innovation Hub
- Regional Climate Leadership Program
- DJAARA Climate Change Strategy
- City of Greater Bendigo Climate Change Risk Assessment for the organisation.

- Northern Victorian Integrated Municipal Emergency Management Plan 2019
- Healthy Landscapes: Practical Regenerative Agricultural Communities Program which seeks to build farmer resilience to climatic changes.

The problem

- There are record levels of ocean temperatures, sea ice loss, land ice loss, land temperatures, extreme weather events and sea level rise. All of these measures will continue to rise until we stop using fossil fuels.
- More frequent and severe natural disasters and extreme weather including bushfires, droughts, floods and heatwaves are impacting infrastructure costs and the health and wellbeing of communities across the Greater Bendigo. One example is the growth in domestic violence incidents in the months following heatwaves, floods and bushfires.
- Generally hotter and drier conditions will have a severe impact on agriculture and liveability. There has been a 53% reduction in water inflows to the region's water storages over the last 25 years.
- Increased waterborne, vector and zoonotic borne diseases.
- Lack of climate ready housing and infrastructure resulting in increased energy costs and government expenditure on disaster relief and recovery.





CITIES POWER PARTNERSHIP CITIES POWER PARTNERSHIP Mayor Cr Andrea Metcalf, Collaboration Coordinator lan McBurney and Cr Jennifer Alden accepting a Highly Commended award at the Cities Power Partnerships local government awards in Melbourne in September 2023

CLIMATE CHANGE ADAPTION

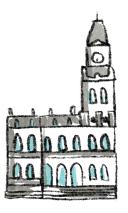
Did you know?

LIMITING GLOBAL WARMING TO 1.5°C RATHER THAN 2°C COULD RESULT IN UP TO 420 MILLION FEWER PEOPLE BEING FREQUENTLY EXPOSED TO EXTREME HEATWAVES AND AROUND 65 MILLION FEWER PEOPLE BEING FREQUENTLY EXPOSED TO 'EXCEPTIONAL' HEATWAVES.

("Preparing for the Heatwaves of the Future", UN and Red Cross Report, 2022)

The strategy

- 1. Net Zero Emissions Water supply by 2030
- 2. Local climate action planning that addresses adaptation as well as mitigation
- 3. Programs with co-benefits i.e. that achieve mitigation and adaptation outcomes.
- 4. Adaptive emergency response and recovery processes
- 5. Integration of first nations approaches into climate resilience programs.



"OUR REGION IS HIGHLY EXPOSED TO THE CONSEQUENCES OF CLIMATE CHANGE AND WE MUST PLAY OUR ROLE IN DELIVERING A RAPID GLOBAL REDUCTION IN CO2 EMISSIONS WHILE WE ALSO IMPLEMENT CLIMATE ADAPTATION STRATEGIES TO MAINTAIN OUR STATUS AS AN OUTSTANDING REGION TO LIVE"

Damian Wells,
Managing Director, Coliban Water

A NOTE ABOUT **MONITORING** AND EVALUATION

Annual Report

The GBCC team will produce a public annual report based on the indicators listed in each section of the Roadmap above (and any new indicators that appear) and on the progress of the 35 priority projects.

Project Evaluation

In addition to this, the 35 projects will need their own individual methods of evaluation and reporting to ensure their success and to ensure that what we learn is available to other places for replication.

















Agnico Eagle

Agnico Eagle have an emissions reduction target of net-Zero emissions by 2050, with an interim target of a 30% reduction in absolute Scope 1 and Scope 2 emissions by 2030 based on 2021 levels.

To reduce greenhouse gas emissions Agnico Eagle has:

- Established a climate action governance framework.
- Incorporated energy efficiency and emissions reduction into their strategy.
- · Set metrics and targets.
- Carried out site-specific climate-related risk assessments.
- Published their first Climate Action Report.
- Implemented several greenhouse gas reduction initiatives including investing in electric vehicles and a battery electric loader in use at Fosterville.

There are three primary areas of focus across Agnico Eagle operations:

- Energy efficiency
- Technology transition
- Increased renewable energy

They will explore additional opportunities for collaborations with governments, industry, and communities, and continue to identify and evaluate opportunities to increase the proportion of energy from renewable sources.



Bendigo and Adelaide Bank

Bendigo and Adelaide Banks business plan is to reduce GHG emissions by 50% by 2030 and 95% by 2040 from their baseline year of 2020. This includes both the emissions associated with our operations and our portfolio (financed emissions).

To date, Bendigo and Adelaide Bank has undertaken the following emissions reduction activities:

- Expanded solar panel installations to feasible branch and office sites.
- Purchased green power to supplement solar power generation to ensure they are 100% renewable by 2025.
- Continue to phase out gas from branch and office locations, subject to feasibility.
- Transitioned their fleet to EVs where applicable.
- Conducted campaigns to increase adoption of paperless statements.
- Updated their green loan pricing to support our customers in taking up green products such as solar panels or EVs.

The banks Climate and Nature Action Plan, currently in development aims to achieve the following emissions reductions actions in the future:

- Uplift management and oversight of climate- and nature-related actions to embed them in BAU activity.
- · Identify and quantify climate-related risks.
- Identify and assess nature-related risks.
- Scenario analysis: Enhance BEN's capability to execute physical and transitional climate risk scenario analysis.
- Empower the business to identify, assess and act on

- climate and nature-related opportunities.
- Embed climate risk and opportunity as a key consideration in our strategic choices, risk appetite and materiality.
- Build internal engagement and knowledge regarding the Bank's response to climate change and natural capital.
- Enhance understanding of climate change and natural capital impacts for our customers and communities.
- Explore opportunities to develop new or enhance existing solutions to support customers to reduce their carbon intensity, adapt to climate change and improve natural capital outcomes.
- Procure 100% renewable energy by end of 2025.
- Improve operational emissions data.
- Mature their approach to financed emissions.
- Engage customers for targeted, real-world financed emission reductions.
- Neutralise their emissions, with intentional impact.
- Establish themselves as bank with an aspiration for a positive impact on nature and biodiversity.
- Authentic reporting against relevant and evolving frameworks.
- Revised and reaffirmed corporate position on climate change and nature to reflect current understanding, science, technology, policy and sentiment.
- Influence the capital system by engaging with relevant industry, government, and other stakeholders to share knowledge, build capacity, and support action on climate change and nature issues.



RACV Solar

RACV Solar is one of Victoria's largest solar installers. Known for their premium products, service and reliability, RACV Solar acquired Central Victoria's largest solar retailer, Bendigo-based business Cola Solar, in 2022.

When Cola Solar's local team of over 40 employees joined RACV Solar, the company was eager to be a part of the Greater Bendigo Climate Collaboration to support our goal to become a world leading zero-emitting city.

Solar is an important part of the larger RACV organisation, which began back in 1903 as a motorist's club and has since expanded its products and services to suit the changing needs of Australians. With over 2 million members, RACV has made several investments to help homes, businesses and communities make the switch to clean energy.

The member organisation offers products and services such as:

- Solar panels and batteries through RACV Solar
- A carbon neutral retail energy offer, Arcline by BACV.
- Invested in electric vehicle charging companies JET Charge, Chargefox and Re:Start – a company that offers roadside and mobile EV charging

- A partnership with Hyzon, manufacturers of hydrogen vehicles.
- All RACV Resorts, Clubs and offices are now using renewable energy from a combination of on-site solar installed by RACV Solar and power the resorts buy from Snowy Hydro.

Now based in Bendigo, RACV Solar is investing in the local region, helping put solar on buildings across Bendigo through our Power it from the Rooftops project, the Greater Bendigo Climate Collaboration and RACV's Solar in the Regions program with three solar and battery systems donated to community facilities in the Greater Bendigo region.

The team has been operating in and around Bendigo with Cola Solar for over a decade, having completed over 7000 installations across the region to help thousands of Victorians make the switch to cleaner energy. Now, with the backing of RACV, the team is excited to be able to extend their support to customers and the community even further while continuing to deliver the same quality service and local knowledge Central Victoria has come to expect.



Latrobe University

La Trobe University is committed to achieve university wide Net Zero (scope 1 and 2 emissions) by 2029, from a 2019 baseline year. The Mildura and Shepparton Campuses certified by Climate Active as net zero for 2021. The Bendigo and Albury & Wodonga Campuses are on track for Climate Active certification for Net Zero for 2022.

A range of projects have been implemented at all La Trobe campuses, including

- the installation of rooftop solar panels,
- · energy efficient LED lights,
- mechanical system efficiency upgrades,
- and batteries to store solar energy.

These projects have reduced carbon emissions by a significant margin. A more detailed list of actions per year can be viewed here https://www.latrobe.edu.au/sustainability/net-zero/our-journey-so-far

In the future Latrobe will be taking the following key actions to ensure they reach their emissions reduction targets.

- Increase onsite renewable generation for all campuses combined by 50% by 2025, from a 2019 baseline year.
- Reduce Scope 3 emissions from passenger vehicle fleet by 90% by 2025, from a 2019 baseline year.
- La Trobe will focus on reducing its scope 1 and 2 emissions through investment in onsite renewable generation and energy efficiency projects.
- La Trobe will continue its investment into green energy purchase and renewable energy as much as feasibly and economically possible. Then, purchasing offsets to offset the remaining carbon emissions.

To find out more about La Trobe's Net Zero strategy: https://www.latrobe.edu.au/sustainability/net-zero



North Central Catchment Management Authority

The North Central Catchment Management Authority plans to reduce greenhouse emissions by 85% by 2025 from our baseline year of 2020. The North Central CMA is committed to net zero emissions by 2030. To date the North Central CMA has:

- Developed the North Central Regional Catchment Strategy 2021-27 renewal through the lens of climate change.
- Benchmarked current carbon footprint to understand areas for improvement to reduce carbon emissions.
- Produced a Pathway to Net Zero Plan which outlines options to achieve targets.
- Purchased of 100% renewal energy for our office including the installation of a
- 50kW solar system.
- Established a Community Carbon Pilot program to achieve local carbon and biodiversity offsets including helping our council partners work towards net zero.
- Review and renewal of the North Central Climate Change Adaptation and Mitigation Plan
- Developed a Climate Ready Revegetation Toolkit which provides practical steps and tools for climate resilient works.

 Invested in several electric fleet vehicles and charging stations available for staff and the public.

In the future the North Central CMA will be taking the following actions to ensure they are reducing their emissions:

- Upgrading office heating and cooling to reduce carbon footprint.
- Expanding their fleet to all electric vehicles.
- Delivering a Community Carbon Pilot project and the establishing of an ongoing program.
- Updating their Procurement Policy to ensure contractors and suppliers consider carbon footprint.
- Regular touch points and reporting to their Board regarding the delivery of the North Central Climate Change Adaptation and Mitigation Plan.



City of Greater Bendigo

Council began reporting its corporate emissions in 2010-11 and setting emissions reduction targets. Council historically reported on Scope 1 and 2 emissions including emissions from landfill waste, purchased electricity, gas and transport fuels.

Council has endorsed a Zero Carbon Plan (ZCP) whose core action is removal of fossil fuel use in all city operations by a program of electrification of buildings, fleet, waste management; with all external electricity energy sourced from 100% renewable sources.

- In 2021 the City joined a partnership of 51
 Victorian councils to source 100% renewable electricity generated by Victorian wind farms.
- The City is transitioning its fleet of vehicles to an electric powered fleet. So far, the City have purchased 9 electric light vehicles and planning for the introduction of electric heavy fleet and plant. We are facilitating the installation of vehicle charging infrastructure at our facilities and depots and at sites across the city.
- The introduction of a food and organic waste collection, diverts methane producing organic waste from landfill, converting this resource to valuable compost.
- The City introduced the "Be the Change" program to engage staff in taking positive action to reduce emissions, waste and improve efficiency in using resources.
- Council began reporting its corporate emissions in 2010-11 and setting emissions reduction targets.

Council historically reported on Scope 1 and 2 emissions including emissions from landfill waste, purchased electricity, gas and transport fuels.

In the future, the City will be undertaking the following key actions to ensure they meet their emissions reductions targets:

- The City via the 'electrify everything' action under the ZCP, will continue replacing its fleet of light and heavy vehicles with all-electric alternatives.
- The City is undertaking a program of removing gas appliances and gas connections from all our building and facilities.
- Procurement of good and services will consider the lifecycle and carbon emissions of the product purchased, to enable the reduction of scope 3 emissions.
- The Circular Economy waste strategy will reduce the amount of waste going to landfill and increase the amounts of materials able to be recycled at the end of their product life.
- The City will align its emissions reporting to the Australian Governments 'Climate Active' standard for measuring, reducing and offsetting emissions, with the net result of carbon neutrality by 2030.

A percentage of the Cities emissions will need to be offset post 2030. The city is trialling a partnership program to generate locally sourced offsets whilst bringing environmental and biodiversity benefits to the local landscapes.



Coliban Water

At Coliban Water, their purpose is to deliver water and wastewater services for community needs now and into the future. Coliban Water's vision is "Water to live, grow and enjoy" and provides water and wastewater services to 49 towns across 16,500sqkm in North-Central Victoria.

Coliban Water is committed to supporting healthy country and communities, powered by our ethical and sustainable practices. As such, Coliban Water's strategic direction is towards zero carbon and zero waste. As an imperative, legislated through the Statement of Obligations (Emissions Reduction), we must shift to 100% renewable energy by 2025 and be emitting net zero carbon by 2030. Coliban Water is also committed to influencing greater action in our region by leveraging partnerships to drive down regional emissions.

So far, Coliban Water have undertaken the following emissions reductions actions in their business.

- Developed Climate Change Strategy and Action Plan
- Partnered in Zero Emissions Water, a company consisting of 13 water corporations that have entered into a collective Power Purchase Agreement
- Commenced implementation of a 5-year Solar PV program

In the future Coliban will be taking the following key actions to ensure they reach their emissions reductions targets:

- Large scale implementation of Solar PV –
 electricity use is approximately 25GWh annually,
 we are seeking to install behind-the meter solar
 generation to substitute 50% of gris-sourced
 electricity.
- Carbon sequestration projects these projects will address the "hard to abate" Scope 1 emissions that arise from vehicle use and sewage treatment emissions from nitrous oxide and methane gases through sequestering carbon in trees on Coliban Water owned land.
- Upgrades with energy efficient equipment selecting equipment that is more efficient and designing out waste where possible
- Roll-out of electric vehicles passenger vehicle fleet will transition over the next 5 years followed by the heavy fleet when technology becomes feasible.
- Hydro-generation projects investigate and implement projects to utilise infrastructure to generate electricity using natural flows



CVGT Employment

CVGT Employment is a not-for-profit, for-purpose employment services provider. For 40 years we have been helping individuals secure sustainable and meaningful work, and employers secure the right staff. To date CVGT has undertaken the following actions to reduce business emissions including:

- Creating a three staged approach to their Sustainability
 Plan and commenced the Kickstart component.
- Creating a Green Team made up of employees to promote and implement environmental strategies.
- Trailing various initiatives at sites, including reusable cups and the removal of bins from office areas.

Governance and reporting

- Highlighted sustainability in their procurement policies and procedures with an emphasis on reducing wastage and greenhouse gas emission.
- Developed and adopted guidelines to help their 'environmental champions' provide valuable information and help drive initiative organisation wide.
- Continue sustainability education by attending forums garnering new ideas to drive initiative.
- All CVGT Employment staff now participate in environmental awareness training.

Waste consumption

- In 2021-2022 financial year, CVGT reduced their carbon emissions by 18% from their base line points.
- Successfully diverted from landfill over a 1000 kilos of old brand uniform to a textile recycler for recycling into bigger and better things!

 Progressed from a largely paper based company to using more electronic systems than ever before.

Transport

In 2021, 9.8% of all company vehicles were hybrid.
 They have ordered an additional 31 hybrids which will increase their percentage to approximately 30% when they arrive.

Power and buildings

- Switched all electricity accounts to greener provider, with their three providers rated in the top 10 by Greenpeace as the greenest providers in Australia.
- Investigating battery storage solutions for our Long Gully head office to improve their solar panels, to remove the need for a diesel generated back up power.
- Installing LED lights at their business sites to reduce our electricity consumption.
- Installed solar at their owner-occupied properties.

In the future CVGT employment will be moving into stage 2 and 3 of their sustainability plans (Making Change and Sustainable Future)

- Stage 2 Making Change: In this stage CVGT aims to initiate major strategies aimed at significantly reducing CVGT Employment's carbon emissions.
- Stage 3 Sustainable Future: Reach net zero emissions, zero landfill, zero transport emissions and a hundred percent renewable energy sources.



Bendigo Foodshare

Bendigo Foodshare is an organisation focused on achieving positive social and environmental outcomes. Solving the social issues of food poverty, building food security; and reducing food waste. Central to this is rescuing food that would have once ended up in landfill and distributing it as food relief across central Victoria.

Foodshare's vision is that every person in central Victoria has secure access to healthy food. Foodshare works with partners and the community to connect people to healthy, affordable food by improving local supply and access, developing food skills and supporting a sustainable and healthy environment. Volunteers are the lifeblood of Bendigo Foodshare – a team of 240 active volunteers help us to rescue, pick, pack and distribute this food.

In the past 12 months Bendigo Foodshare has undertaken the following activities which has reduction in greenhouse gas emissions across the City.

- Sourced and rescued approximately 750,000kg of food from local businesses, farms, food charities and supermarkets.
- Saved an estimated 84 million litres of water through food recovery.
- Saved 1,130 tonnes CO2-e emissions through food recovery.

- Worked 28,015 volunteer hours at a value of \$1.2million.
- Distributed food to nearly 13,000 vulnerable people each week across Central Victoria.
- Corporate Volunteering Pilot "Cooking for Change" - where end-of-life food is brought into the kitchen and turned into valuable meals for food relief. This program aims to save 600kgs of food and make 1,000 meals by the end of 2023.
- Grow Cook Share program aims to increase skills, access and affordability to healthy, sustainable and culturally appropriate local food to more people across Greater Bendigo
- Generating their own electricity by solar power and ensuring all waste entering the organisations is carefully managed.
- Reusing and recycling as much as possible to keep rubbish going to landfill to a minimum.
- Diverting over 8,000kg of green waste not fit for human consumption to their urban farm and community garden projects to be turned into compost to grow more food.
- Recycling all, food crates and egg cartons reused
- Excess bread is given to local farmers for animal feed.
- Using reusable pallet wrap made from polyester and PVC, rather than disposable plastic wrap.



Bike Bendigo

Bike Bendigo works to make going by bike easier – especially for local day-to-day trips. Taking local trips by bike is great for mental and physical wellbeing. This keeps us more connected to the community and the environment - and Bendigo is a beautiful place to enjoy the outdoors.

Biking is an easy way to get some outdoor physical activity every day. By switching some journeys from the car to the bike, we reduce carbon emissions. Bicycle travel is not yet viewed as a viable option by many. Many people are uncomfortable riding alongside cars, but gaps in Bendigo's cycling network mean people may not be able to ride safely.

Bendigo's strong driving culture is another barrier. Active travel and 'multi-modal' travel are not seen as mainstream or the norm, so going by bike or taking the bus can feel like swimming against the tide. Bike Bendigo looks for opportunities and innovative ways to improve Bendigo's cycling infrastructure and to build a culture where going by bike is seen as a normal and attractive transport option.

Bike Bendigo:

- Works closely with local and state government agencies to advocate for connected walking and cycling infrastructure so people can ride safely to where they need to go without having to mix with cars.
- Advocating for opportunities to inspire and support people to switch from going by car to

- using active transport modes (such as walking and cycling) to help reduce carbon emissions from the everyday short trips we all make, and to make our city a safer and more pleasant place to live and move around.
- Supporting people to ride safely and confidently for example, through riding skills and road safety workshops. They have also developed resources, short videos and cycling maps to inspire, educate and support people to go by bike.
- Running monthly community rides, where they show participants great places to ride around Bendigo.
- Spreading the word about the benefits of going by bike – through their enews, media stories and on social media, to help build a culture where it's seen as normal, desirable option.

Supporting people to ride safely and confidently – for example, through riding skills and road safety workshops. They have also developed resources, short videos and cycling maps to inspire, educate and support people to go by bike.

Bike Bendigo is also working to normalise the idea of multi-modal transport – or 'horses for courses': walking and going by bike is a great way to move around for shorter local trips. Buses are another option, or trains for intercity trips. Or we might go by car for trips across town – or when a bike or bus just isn't practical.



Bendigo Sustainability Group

The Bendigo Sustainability Group is an award-winning nonprofit organisation which undertakes several emissions reductions projects across Greater Bendigo community. Some of their activities include:

- Advocating for proactive measures in addressing climate change.
- Educating on sustainable housing through organised talks and on-site evaluations of eco-friendly and sustainable residences.
- Highlighting community and business initiatives in sustainable living at the Bendigo Sustainability Festival.
- Providing insights into energy expenditure, specifically about electricity and gas and offering guidance on

- identifying cost-effective energy retailers and strategies for consumption reduction. Regular free public talks are conducted.
- Illustrating the economic and environmental advantages of solar energy and battery storage and assisting in discerning the cost-effectiveness of solar and battery proposals.

 Regular free public talks are conducted.
- Delivering high-level guidance on understanding carbon footprints.
- Serving as a trusted source for impartial counsel on diverse facets of sustainable living.
- Facilitating collecting and redistributing various waste types to minimise landfill contribution.



ACF Community Bendigo District

ACF is Australia's national environment organisation. They speak out for a world where forests, rivers, people and wildlife thrive. They are proudly independent and funded by donations from our community. ACF Community Bendigo District branch undertakes several activities to support community wide emissions reduction including:

 Active advocacy and submission writing to all levels of government about the need for strong climate action

- Organising community conversation stalls in public places, about the need for climate action
- Publication of brochures on: environmental consequences of climate change, electric vehicles, etc.
- Active involvement in the Bendigo Climate Alliance
- Care of the bush: monthly bushwalks and developing a bushwalking guide to get more people to appreciate our environment

GREATER BENDIGO EMISSIONS ROADMAP