City of Casey

MAPPING OUR WAY TO NET ZERO EMISSIONS



City of Casey

CLIMATE ACTION PLAN 2022-30

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Statement of Acknowledgement

The City of Casey proudly acknowledges the traditional owners, Casey's Aboriginal communities and their rich culture and pays respect to their Elders past, present and future. We acknowledge Aboriginal people as Australia's first peoples and as the traditional owners and custodians of the land on which we work and live.

Diversity Statement

The City of Casey is home to a remarkable diversity of cultures, languages, faiths, identities, landscapes, and stories. From our first Australians to our most recent arrivals and every wave between, the City of Casey welcomes and represents all community members and their respective ambitions to live healthy, rewarding, and happy lives. These intersecting and overlapping community stories form Casey's collective identity and contribute to its evolving, rich history. We recognise this diversity as our strength and we aim to share, nurture, and celebrate it.

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MESSAGE FROM THE CHAIR OF THE ADMINISTRATORS

As the Chair of Administrators at the City of Casey I am proud to present Council's *Climate Action Plan – Mapping our way to net zero emissions*. Through this action plan, Council is committing to net zero corporate emissions by 2030 and will support the community target of net zero emissions by 2040 (or earlier).



Noelene Duff PSM
Chair of Administrators
City of Casey

Climate change affects us all. However, some sectors of the community are more vulnerable than others, such as those living along our coast and in houses that are not well protected from heat waves or intense storms.

People are witnessing emphatic events like the bushfires of 2020 and floods of 2022 and asking leaders at all levels of government to do more to prevent the impacts of climate change. Community members within the City of Casey are no exception and there has been substantial support to take swift and effective action to mitigate our greenhouse gas emissions. We have a shared responsibility to do what we can now to protect our environment and ensure that the current and future generations will not have to endure the catastrophic impacts that will result from extreme levels of climate change.

Following on from commitments in our *Council Plan 2021-25* and *Environment Strategy 2021-25*, the Climate Action Plan provides a roadmap that will enable the rapid decarbonisation of the municipality to mitigate climate change.

The plan's targets and actions are ambitious but achievable and meaningful, considering the municipality's size and future growth. They will set us on the course to a more sustainable and resilient future, guiding decision making and resourcing. The plan outlines a transformational and adaptive approach to how we consider the impact of our activities on greenhouse gas emissions.

Everyone needs to play a role to ensure that our municipality continues to grow and prosper in a sustainable way and the City of Casey will provide the necessary leadership and support to enable this to happen.

WE HAVE A SHARED RESPONSIBILITY TO DO WHAT WE CAN NOW TO PROTECT OUR ENVIRONMENT AND ENSURE THAT THE CURRENT AND FUTURE GENERATIONS WILL NOT HAVE TO ENDURE THE CATASTROPHIC IMPACTS THAT WILL RESULT FROM EXTREME LEVELS OF CLIMATE CHANGE.

EXECUTIVE SUMMARY

Climate change is increasingly threatening communities, infrastructure and biodiversity across the City of Casey. Rising global temperatures are resulting in more intense and frequent heatwaves and storms, as well as long-term impacts like reduced rainfall and sea level rises. Bushfires, flash floods and adverse health impacts associated with extreme heat and thunderstorm asthma will become more severe.

The City of Casey is committed to addressing climate change and has already achieved considerable reductions in greenhouse gas emissions from its facilities and operations. Between 2015/16 and 2021/22 Council made a 59 per cent reduction in emissions, this was mostly attributed to changing all streetlights to LED and sourcing 100 per cent wind power for powering the streetlights. Council will continue to improve the way services are provided so that they will reach net zero greenhouse gas emissions by 2030. Council will demonstrate net zero emissions though climate active certification www.climateactive.org.au >

The challenge to mitigate the causes of climate change extends beyond Council to residents and businesses across the City of Casey. This has resulted in setting a separate target for the Casey community, to achieve net zero greenhouse gas emissions by 2040. This target aligns with the South East Councils Climate Change Alliance (SECCCA) commitments and is supported by the Greater South East Melbourne (GSEM) Zero Emissions Roadmap that seeks collaborative partnerships and regional policy alignment.

Beyond this, there is also resounding expectation from our community that we need to take decisive and effective action to reduce our contribution to climate change. This means progressively changing the way we live and work, making necessary changes like increasing the use of renewable energy and improving energy efficiency. These changes not only benefit our environment but make economic sense and the financial imperative will only increase as costs for energy and materials continue to rise.

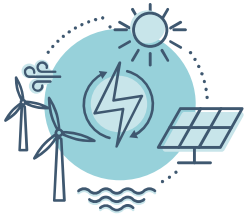
This plan takes a principled, strategic and evidence-based approach to climate change mitigation that has been informed and tested with the community and almost 1,000 contributions to the plan's development. To provide clear direction and guidance, actions have been grouped into the following six themes shown below.

The plan importantly outlines how it will be monitored, evaluated and communicated to ensure that Council and the community remain on track to achieve the vision for a net zero emissions City.

SIX ACTION THEMES



ENERGY EFFICIENT BUILDINGS



RENEWABLE ENERGY



TRANSPORT



CIRCULAR ECONOMY



SUSTAINABLE LAND USE AND PLANNING



EDUCATION AND EMPOWERMENT

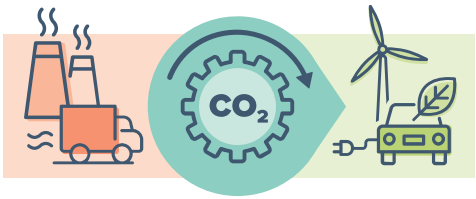
OUR PLAN AND ITS PURPOSE

The *City of Casey Climate Action Plan 2022-2030 – Mapping our way to net zero emissions* (the plan), provides direction to achieving net zero emissions targets.

The plan is a key outcome of Council's *Environment Strategy 2021-25* and aligns with Strategic Objective 3 of the *Council Plan 2021-25* to 'Foster environmentally sustainable practices and work towards being climate ready.' It also meets requirements within the *Local Government Act 2020* for councils to consider climate change risks within council's decision-making and demonstrate genuine responsibility for community members and infrastructure.

The plan has been developed in consultation with the Casey community. Their participation has provided an overwhelming message that they want to take action to address climate change. Importantly, they have provided many valuable contributions and suggestions for the plan.

The plan covers feasible, effective and meaningful actions that set both the community and Council on the path to net zero emissions. The City of Casey's attributes - such as its size, growth, economy and community - mean that local climate mitigation actions undertaken will lead to substantial benefits. The plan will also serve to attract and direct funding and resourcing, whether that be from governments, businesses or individuals.



NET ZERO EMISSIONS

IMPACTS TO DATE

Changes to our local climate have been documented over time.

AVERAGE SEA LEVELS IN WESTERN PORT BAY HAVE

RISEN BY 10 CM IN THE LAST 100 YEARS

(Water Technology, 2014)

SINCE 1950, AVERAGE TEMPERATURES IN THE CITY OF CASEY HAVE

RISEN BY BETWEEN 1.2°C AND 1.5°C

(DELWP, 2015)

AVERAGE ANNUAL RAINFALL HAS

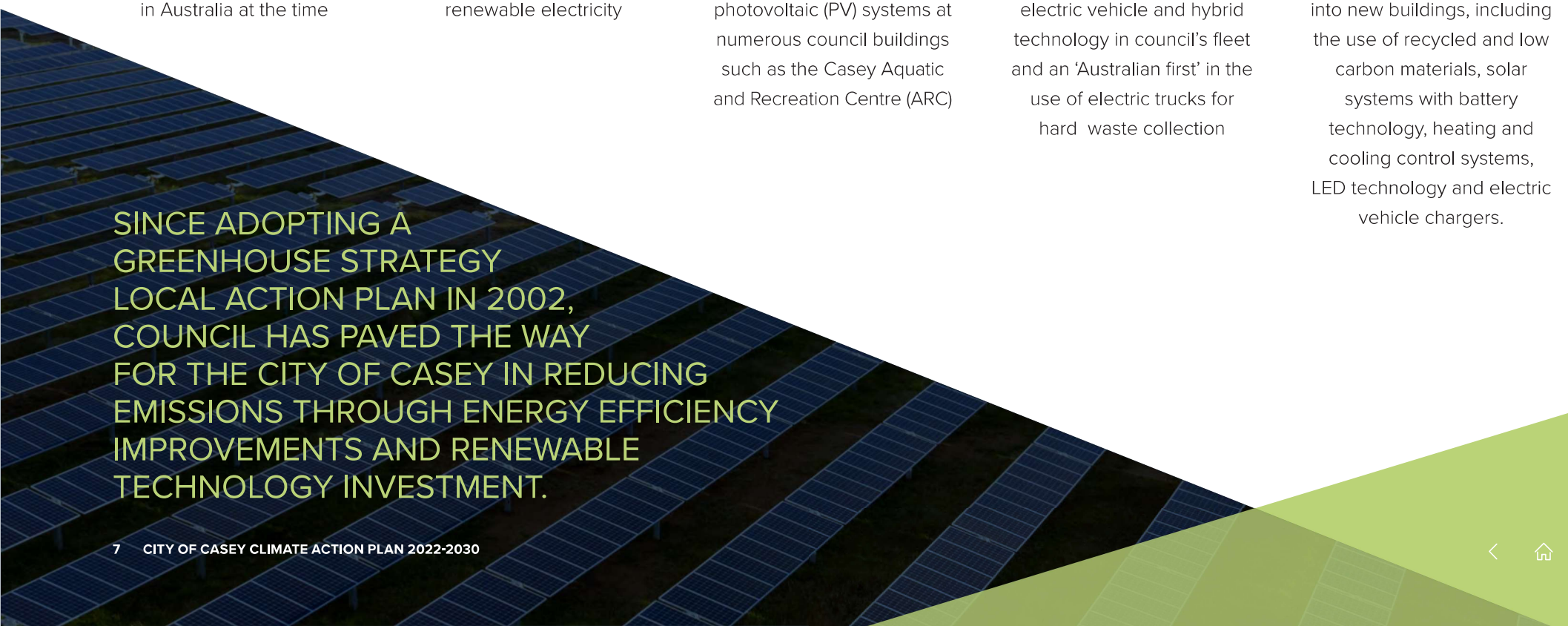
DECREASED BY 100 MM - 200 MM

(DELWP, 2015)

OUR CLIMATE JOURNEY

Council has a long history of reducing greenhouse gas emissions produced from its operations. Since adopting a Greenhouse Strategy Local Action Plan in 2002, council has paved the way for the City of Casey in reducing emissions through energy efficiency improvements and renewable technology investment. This was facilitated through the implementation of a series of emissions management plans, which provided fully costed and staged approaches that included actions like:

- The second-largest LED streetlight upgrade program in Australia at the time
- A power purchasing agreement for 100 per cent renewable electricity
- Installation of >1,300 kilowatt (kW) of rooftop solar photovoltaic (PV) systems at numerous council buildings such as the Casey Aquatic and Recreation Centre (ARC)
- A significant increase in the use of 100 per cent electric vehicle and hybrid technology in council's fleet and an 'Australian first' in the use of electric trucks for hard waste collection
- Incorporating Ecologically Sustainable Design (ESD) into new buildings, including the use of recycled and low carbon materials, solar systems with battery technology, heating and cooling control systems, LED technology and electric vehicle chargers.



SINCE ADOPTING A GREENHOUSE STRATEGY LOCAL ACTION PLAN IN 2002, COUNCIL HAS PAVED THE WAY FOR THE CITY OF CASEY IN REDUCING EMISSIONS THROUGH ENERGY EFFICIENCY IMPROVEMENTS AND RENEWABLE TECHNOLOGY INVESTMENT.

The City of Casey has also been an active member of the South East Councils Climate Change Alliance (SECCCA). This collaboration has enabled the pooling of resources to undertake a range of innovative projects and advocacy to reduce greenhouse gas emissions across Melbourne's South-East.

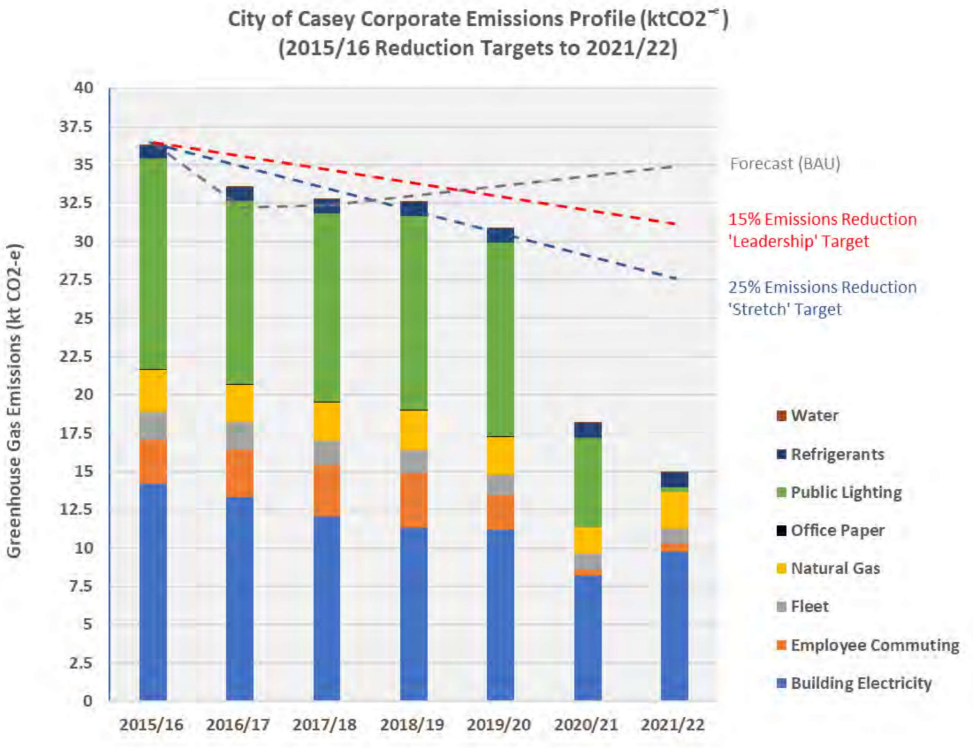
Council has also contributed to the development of the Greater South East Melbourne (GSEM) Zero Emissions Roadmap. The vision of this regional roadmap is to create a thriving economy underpinned by innovation and sustainable practices that drives down carbon emission while creating jobs of the future. This roadmap will ensure GSEM attracts new and emerging decarbonising investment and technologies and better support industry and business to transition to zero emissions.

In 2016 the City of Casey also took part in the TAKE2 pledge to help Victoria reach net zero emissions by 2050. Climate change mitigation is front and centre in the current Council Plan, emphasising its importance in ongoing and future Council activities.

THESE AND OTHER ACTIONS, PARTICULARLY EFFICIENCY IMPROVEMENTS AND SOURCING RENEWABLE ENERGY FOR OUR PUBLIC LIGHTING, HAVE LED TO HALVING CORPORATE EMISSIONS IN 2021/22 FROM 2015/16 LEVELS, AND GENERATING ONGOING COST-SAVINGS AS SHOWN IN FIGURE 1.

The emissions reduction achieved is considerably higher than the Business-As-Usual Forecast (had no improvements been made) and the 15 per cent Emissions Reduction 'Leadership' Target and 25% Emissions Reduction 'Stretch' Target (from the baseline FY2015/16) adopted in the Emissions Management Plan 2018-22. COVID-19–induced reductions in staff activity have also contributed to reducing corporate emissions during this period.

FIGURE 1 - CITY OF CASEY CORPORATE EMISSIONS PROFILE



COUNCIL PLAN 2021-25

City of Casey is committed to delivering efficient and best practice services through its Council Plan 2021-2025. The Plan identifies various strategies and indicators to guide council actions on emission reductions in the city.

1.4 Manage urban growth and deliver future-focused infrastructure that is innovative, sustainable and adaptable

1.5 Prioritise investment that revitalises our existing infrastructure and services to meet changing needs

3.2 Contribute towards a circular economy through waste management and resource recovery

3.3 Support a climate-ready city through climate change mitigation and adaptation

5.2 Improve Council decision-making to reflect community needs and priorities

7.2 Identify and implement a sustainable operating model which enhances Casey's future-readiness

ENVIRONMENT STRATEGY 2021-25

Many of the strategies in the Environment Strategy will mitigate greenhouse gas emissions. Council has placed a strong emphasis on reaching net zero emissions. Strategy 1.1 Improve energy efficiency and increase the use of renewable energy sources to mitigate climate change and Strategy 1.2 Engage, advocate, and empower the community to reduce carbon emissions and energy consumption provide clear directives on the need to improve energy efficiency and increase our reliance on renewable energy and support the community to do likewise.

GREENHOUSE GAS EMISSIONS BOUNDARIES AND PROFILES

CORPORATE EMISSIONS PROFILE:

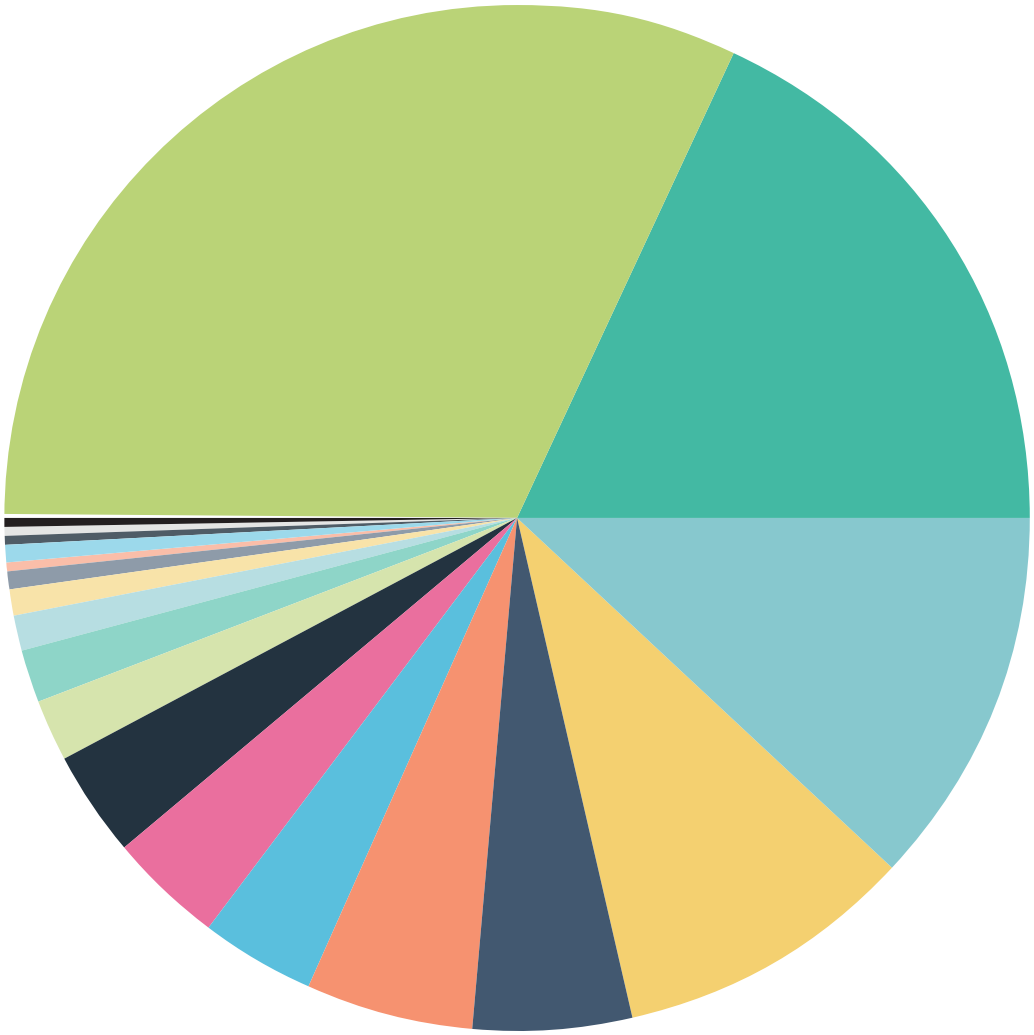
Casey's corporate emissions boundary includes those emissions from sources where:

- Council has operational control (OC) and can manage emissions e.g. electricity and gas used at Bunjil Place where council has full control of operations.
- Third parties may have direct operational control, but council can have significant influence on the management of emissions e.g. emissions generated from electricity use at Casey ARC which is operated by YMCA.

Since 2009/10 the City of Casey has effectively measured, monitored and reported its greenhouse gas emissions in line with the NGA Factors (National Greenhouse Accounts Factors). With its target of becoming carbon neutral, council has now expanded its inventory to include additional emissions in-line with 'Climate Active' certification. A new baseline inventory for FY2021/22 has been established to support Council's 2030 carbon neutrality aspirations (Figure 2). It is noted that the estimated emissions are based on the data provided at the time of reporting and it is acknowledged that these values may vary as more accurate data accounting systems become available over the life of this plan.



FIGURE 2 - CITY OF CASEY COUNCIL GREENHOUSE GAS EMISSIONS BASELINE 2021/22



FY2021/22 CORPORATE CLIMATE ACTIVE ALIGNED EMISSIONS INVENTORY

Electricity - operational control (OC)	**5,874**
Electricity consumption (no O)	**3,278**
Fugitive emissions from closed landfill sites	**2,154**
Natural Gas consumption (no OC)	**1,730**
Fleet fuel consumption	**914**
Refrigerants	**963**
Transmission & Distribution losses from electricity (OC)	**646**
Natural gas (OC)	**655**
Employee commuting	**604**
Transmission & Distribution losses from electricity (no OC)	**360**
Streetlight & Minor Public Lighting	**297**
Construction Materials	**233**
Transmission & Distribution losses from natural gas (no OC)	**137**
Council Waste	**90**
Water consumption	**82**
Contractor Transport Fuels	**80**
Indirect fuel emissions fromBcouncil fleet vehicles	**47**
Transmission & Distribution losses from natural gas (OC)	**48**
Transmission & Distribution losses from electricity (street/public lighting)	**33**
Key consumables	**8**
TOTAL EMISSIONS:	**18,233**

COMMUNITY EMISSIONS PROFILE:

Casey's community emissions boundary includes those emissions from sources where:

- The community has operational control and can manage emissions e.g. electricity and gas used in households, commercial and industrial buildings/facilities, fuels for road transport, solid waste and wastewater generation.
- Third parties may have direct operational control, but the broad community can have an influence on the management of emissions e.g. public transport.

With the goal of net zero community emissions, a GPC-compliant (Global Protocol for Community-Scale Greenhouse Gas Emission Inventories) Community Emissions Profile was adopted to provide a community emissions baseline. The GPC was created by ICLEI Oceania, the World Resources Institute and C40 Cities Climate Leadership Group providing an internationally recognised best practice greenhouse gas reporting standard.

The City of Casey's community emissions inventory for 2019/20 establishes a baseline that supports action identification and prioritisation and provides a benchmark for monitoring and reporting as the city progresses with the plan's implementation towards a net zero emissions target.

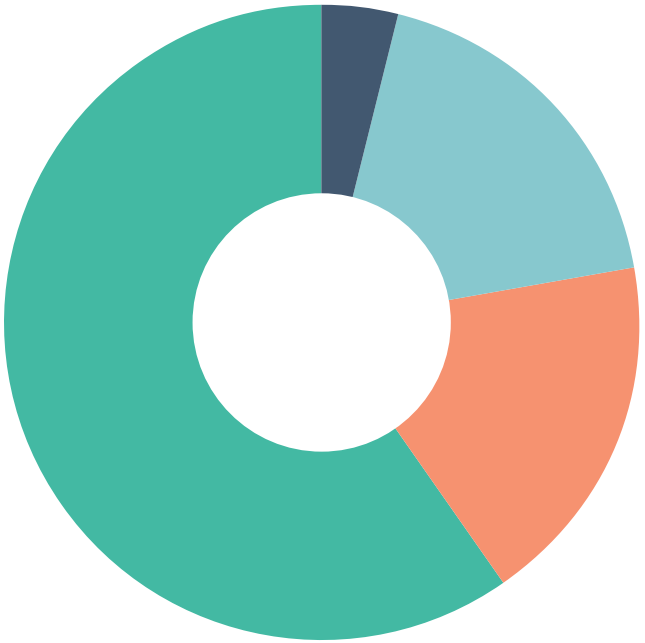


FIGURE 3 - CITY OF CASEY COMMUNITY GREENHOUSE GAS EMISSIONS BASELINE 2019/20

WASTE	4%

TRANSPORT	18%
- Automotive	15%
- Motorcycle	1%
- Bus	1%
- Rail	1%

GAS	18%
- Residential	13%
- Commercial	3%
- Industrial	2%

ELECTRICITY	59%
- Residential	28%
- Commercial	17%
- Industrial	14%

TOTAL MUNICIPAL EMISSIONS: 2,605,000 tCO^2_e

Source: Snapshotclimate.com.au

NET ZERO EMISSIONS TARGET

The concept of Net Zero Emissions describes a balance between the amount of carbon released into the atmosphere and the amount of carbon taken out of it. We can measure the carbon that is emitted into the atmosphere and the carbon that is drawn back down. When the drawdown is equal to or greater than the emissions, Net Zero Emissions is achieved. The plan commits to the following zero emissions targets.

The City of Casey is setting ambitious net zero targets for reducing both corporate and community emissions.

Key components of this Plan include:

CORPORATE EMISSIONS TARGET:

- Adopting an 8-year target that council will have net zero emissions by 2030
- Adopting a 4-year target that 100 per cent of council's corporate energy supply will be met through renewable energy sources
- Alignment of Casey's corporate emissions inventory with 'Climate Active' certification to ensure alignment with the national standard for a zero emissions baseline
- Prioritising actions and investment so that cost savings generated can be reinvested into further emission reduction actions.

COMMUNITY EMISSIONS TARGET:

- Adopting a target that the City of Casey will have net zero emissions by 2040 (or earlier).
- Adopting a target that was developed through SECCCA as part of a suite of targets for neighbouring council areas to meet the 1.5_{0}C limit for increased global average temperatures
- Aligning Casey's community emissions inventory baseline with Snapshot Climate - Australian Emissions Profiles
- Prioritising actions that offer the community significant financial and social benefits.

It should be noted that while council can directly achieve its corporate emissions target through strategic and operational activities such as installing solar PV systems on council buildings, this is not the case for community emissions. Therefore, a collective approach will need to be implemented in which council, State and Federal governments, businesses and residents each do their part to reach the target.

What are community and corporate emissions?

Corporate emissions are defined as greenhouse gas emissions generated by Casey council through its operations and activities. Community emissions are generated by all other activities within the City of Casey from households, commercial, agricultural and industrial businesses, and transport.



NET ZERO CORPORATE EMISSIONS BY 2030



NET ZERO COMMUNITY EMISSIONS BY 2040 (OR SOONER)

LEGISLATIVE REQUIREMENTS

In 2015 the International Paris Climate Change Agreement was signed by 195 countries including Australia. The agreement sets global emission reduction targets to limit the global temperature rise to less than 2°C by 2050 and to limit the global temperature rise to less 1.5°C above pre-industrial levels.

To achieve this goal, the Climate Change Bill 2022 outlines Australia's greenhouse gas emissions reduction targets of 43 per cent from 2005 levels by 2030 and net zero by 2050. In addition, Victoria's Climate Change Act 2017 has established a goal for the State of net zero greenhouse gas emissions by 2050, with interim targets for 2025 and 2030.

The City of Casey has developed the plan to demonstrate our response to addressing the emission reduction targets set out in the Paris Agreement, Australia's Climate Change Bill and Victoria's Climate Change Act.

THE CITY OF CASEY HAS DEVELOPED THE PLAN TO DEMONSTRATE OUR RESPONSE TO ADDRESSING THE EMISSION REDUCTION TARGETS SET OUT IN THE PARIS AGREEMENT, AUSTRALIA'S CLIMATE CHANGE BILL AND VICTORIA'S CLIMATE CHANGE ACT.



DEVELOPING THE CASEY CLIMATE ACTION PLAN

The plan has been developed in collaboration with the Casey community and across various departments of the City of Casey to ensure that it is comprehensive, meaningful, feasible and supported. Effective climate change actions require substantial and ongoing collaboration. Council, community members, businesses and government entities need to work together to provide support and resources. Between February and April 2022, the City of Casey undertook a range of engagement activities to understand the views of the community on climate change mitigation as well as the sorts of actions that should be undertaken to achieve this. Strong support for addressing climate change was heard with close to 1,000 contributions provided by people across a wide range of ages and backgrounds who live throughout the City of Casey.

The community were asked for their opinions on what actions Council should take and which actions should be prioritised. The feedback was consistent in terms of the proportion of support for actions. Valuable insights were also provided into what people have been doing themselves to mitigate their impact on climate change.

Council officers were asked to contribute to the plan through workshops held with City of Casey staff to generate suggestions for actions to achieve the plan's targets. A working group of key staff was used to test specific actions further.

The development of the plan relied on a range of City of Casey datasets on greenhouse gas emissions and the impact of mitigation actions.

Open Data Exchange that presents information on many council features including a breakdown of greenhouse gas emissions by suburb.

Increases in digital capacity and technology will provide opportunities to track our journey to net zero emissions and provide a means to share information on local climate change projects, learnings and successes. The plan has been informed by other projects, for example SECCCA has completed numerous innovative projects in collaboration with the City of Casey and neighbouring councils to enable more effective climate change mitigation and adaptation activities. Examples include the Electric Vehicle Charging Roadmap and Small Business Energy Saver Program >.

The Department of Environment, Land, Water and Planning (DELWP) has also coordinated valuable research and policy work on addressing climate change.

A Shared Commitment

The climate action plan outlines actions that need support and resources from all sectors of the community such as:

- Residents
- Registered Aboriginal Parties
- State Government
- Schools
- Community groups
- Federal Government
- Businesses
- Local Governments
- Researchers and academics

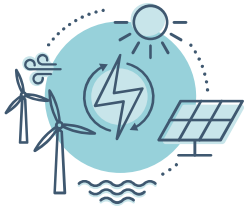
Council is committed to achieving the actions and targets within this plan within its sphere of influence (e.g. emissions produced by council activities) and will educate, promote and advocate for all sectors to achieve the actions and targets for community emissions. The reduction in community emissions will depend on the commitment from all stakeholders. While it may seem overwhelming to an individual, focusing on one small action at a time, will make a big difference in the long term.

THE SIX THEMES AND ACTIONS

The Climate Action Plan is organised into six themes which are divided into community and corporate (council) actions to provide clarity around where the emissions reductions will be coming from. The corporate actions can be implemented by the City of Casey through measures like providing financial and staffing resources whereas the community actions will require much broader support and resourcing.



ENERGY EFFICIENT BUILDINGS



RENEWABLE ENERGY



TRANSPORT



CIRCULAR ECONOMY



SUSTAINABLE LAND USE AND PLANNING



EDUCATION AND EMPOWERMENT

The subsequent actions are intended to strike a balance between being broad enough to provide the flexibility and innovation required for strategic planning while being prescriptive enough to provide rigour, direction and accountability. Where possible, actions have been developed using SMART criteria (Specific, Measurable, Achievable, Relevant and Time bound) to help evaluate their effectiveness.

For each action, the financial investment by council has been estimated and grouped into four categories defined in Table 1. This cost is the investment by council only and does not include the investment from the community or other parties.

TABLE 1 - COST ESTIMATE CATEGORIES FOR EACH ACTION

Cost Estimate	Implications
Existing	The action can be delivered by council officers in their substantiated roles as part of their duties and will not require additional funding.
Low	To deliver the action will require an estimated investment of less than $10,000.
Medium	To deliver the action will require an estimated investment of between $10,000 and $100,000.
High	To deliver the action will require an estimated investment of more than $100,000.

Each action listed in the plan will require Council to play a role in the delivery of the action. These roles are outlined below in Figure 4. This will help the community understand what Council is committing to doing and where we are relying on other parties to drive or contribute to the success of an action.

FIGURE 4 - ROLE OF COUNCIL

Collaborator

Council will work jointly on an activity or project with the community or another organisation. For the action to succeed, Council requires support or input from this group

Promoter

Council will use their connections and communications platforms to promote the action to the community.

Enabler

Council will use their resources, such as funding, staff and assets to ensure this action is completed

Advocator

Council will publicly support and recommend the action to another body such as the State or Federal government to gain support or funding

Educator

Council will provide educational material to the community to help residents and businesses reduce their carbon emissions





ENERGY EFFICIENT BUILDINGS

The City of Casey comprises of many buildings including council, residential, commercial, industrial, educational and institutional. With forecasts for further growth in all these areas, reducing our building energy use will create enormous cost savings and reduce reliance on traditional power generation sources (e.g. coal, gas) and associated infrastructure. The characteristics of the City of Casey in terms of growth and size presents enormous opportunities to create substantial and enduring reductions in greenhouse gas emissions as well as significant cost savings that can reduce the cost of living pressures and business overheads.

The two approaches to improving energy efficiency are through: incorporating this in new building design and construction; or updating/improving existing buildings and business practices. It is easier and cheaper to include energy efficiency considerations at the design phase; this should not preclude undertaking actions on existing buildings given they will also generate substantial environmental and cost benefits.



CLIMATE ACTION IN THE COMMUNITY

City of Casey Building Improvement Program

The City of Casey continues to improve the energy efficiency of its council buildings. As an example, greenhouse gas emissions from Casey Aquatic and Recreation Centre (ARC) have reduced by more than 50 per cent since 2012, winning a 2020 Keep Victoria Beautiful Award in the energy category. Recent efficiency improvements include optimising circulation pump speeds overnight, upgrading the fan wall, heating ventilation and air conditioning (HVAC) efficiency and café partition wall upgrades, and installation of a 340kW rooftop solar system.

Trends in energy efficiency and renewable energy

In 2021, only 9 per cent of rental properties had rooftop solar PV panels compared to 42 per cent of properties where the occupier owned the property. Similarly, only 37 per cent of rental properties had ceiling insulation compared to 73 per cent of owner occupiers. The disparity for wall insulation was less with 23 per cent and 39 per cent of properties respectively.

(Energy Consumers Australia, 2021).

Sustainable schools in Casey

Students at Harkaway Primary School benefit from a strong focus on sustainability as part of their education. Students participate in the ResourceSmart program coordinated by Sustainability Victoria, Kids Teaching Kids program coordinated by Earthwatch Australia and the Dolphin Research Institute- I sea, I care program.

In 2021, the school installed a 30kW rooftop solar system and replaced fluorescent and halogen lights with efficient LEDs. The school now enjoys reduced energy bills and is demonstrating the benefits of renewable energy to their students.

WHAT WE HEARD FROM THE COMMUNITY?

Insights from the community showed that many have already done work to improve efficiencies within their homes like installing LEDs instead of incandescent lights, insulating ceilings, walls and floors and practicing ongoing behaviour change like having shorter showers and switching off appliances at the wall. They showed strong support for actions that assist vulnerable groups in the community such as the elderly, low-income earners and those living in older houses as they are most prone to the impacts of climate change and cost of living pressures.

Feedback included the need for:

- Locally specific information on reducing building energy usage
- Increasing accessibility to hot water heat pumps and other efficiency products
- Extra support for businesses to improve energy efficiency, including auditing and developing a business-specific reduction target and strategy.

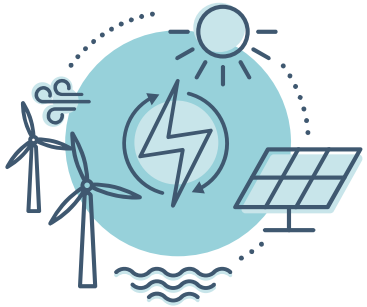


TABLE 2 - COMMUNITY ACTIONS: ENERGY EFFICIENT BUILDINGS

Number	Community Action	Start Date	Council's Role	Cost Investment
Comm 1.1	Provide Home Sustainability Audit Kits for the community to assess the energy efficiency of their homes	2023/24	Educator	Low
Comm 1.2	Promote to community groups and small and medium enterprises (SME) to encourage renewable energy or energy efficiency projects to be financed through a revolving energy fund program such as CORENA (Citizens Own Renewable Energy Network Australia)	2023/24	Promoter	Medium
Comm 1.3	Develop and distribute an energy efficiency brochure to Casey businesses operating out of factories to support the uptake of LED lighting upgrades, solar power purchase agreements and other energy saving programs	2023/24	Educator	Medium
Comm 1.4	Provide industry specific energy efficiency workshops/resources for SMEs with information and support for accessing grants/funding, undertaking audits and implementing efficiency retrofits and upgrades	2024/25	Educator	Medium
Comm 1.5	Under the Planning and Environment Act 1987 Amendment VC221, support property developers to build no gas, all electric developments	2024/25	Advocator	Existing
Comm 1.6	Advocate to raise funds for energy efficiency programs for businesses in Casey e.g. energy saving smart controller upgrades, door & window sensors, movement sensors	2024/25	Advocator	Medium
Comm 1.7	Advocate for the delivery of an energy efficiency program for low-income populations	2024/25	Advocator	Existing
Comm 1.8	Investigate a community heat pump bulk buy program for the City of Casey	2024/25	Collaborator	Existing
Comm 1.9	Incorporate ESD requirements in new developments through a planning scheme amendment	2023/24	Enabler	Existing

TABLE 3 - COUNCIL ACTIONS: ENERGY EFFICIENT BUILDINGS

Number	Council Action	Start Date	Council's Role	Cost Investment
Council 1.1	Deploy real time monitoring meters on selected energy and water meters in council facilities	2023/24	Enabler	Medium
Council 1.2	Continue council building LED lighting upgrade program	2023/24	Enabler	High
Council 1.3	Progressively implement the heating, ventilation and air conditioning (HVAC) upgrade program in council buildings	2023/24	Enabler	High
Council 1.4	Revise council's ESD policy to consider best practice energy efficiency building design and continue to invest 6% of building capital towards ESD	2022/23	Enabler	Existing
Council 1.5	Install occupancy sensors on council facilities' split systems	2023/24	Enabler	Low
Council 1.6	Where practical, install building management systems in council buildings	2023/24	Enabler	High
Council 1.7	Continue to analyse and restructure utility bills and investigate critical demand responses to reduce energy costs to council	2023/24	Enabler	Low
Council 1.8	Progressively electrify community facilities and sports pavilion by installing efficient heat pump hot water systems and, where possible, retrofitting kitchens with induction cooktops in-line with SECCCA's Electrification Project	2024/25	Enabler	High
Council 1.9	Complete feasibility and design work for a 'No Gas' Clyde Aquatic Leisure Centre	2024/25	Enabler	Medium
Council 1.10	Identify additional opportunities for using electric-powered plant in council operations	2024/25	Enabler	Existing
Council 1.11	Progressively implement a Building Insulation Program for existing buildings	2025/26	Enabler	High
Council 1.12	Investigate the options for a 'no active heating and cooling' solar passive facility for Casey	2025/26	Enabler	High
Council 1.13	Upgrade 8,110 decorative Mercury Vapour streetlights to LED technology	2023/24	Enabler	High
Council 1.14	Install 'smart' sensor technology in existing Building Management Systems	2022/23	Enabler	Medium
Council 1.15	Conduct a minor public lighting inventory in sporting and open spaces to support energy efficiency upgrades	2024/25	Enabler	Medium
Council 1.16	Replace all conventional type minor public lighting with energy efficient luminaires including capability to connect with high level interface (smart cities/connected lighting)	2024/25	Enabler	High



RENEWABLE ENERGY

There has been a relatively high uptake of renewable energy sources within the City of Casey with over 35 per cent of residential houses with solar PV systems which can generate between 45-90 per cent of daily household power consumption (Solar Victoria, 2022) (Australian Photovoltaic Institute, 2022). These installations reduce energy use from the grid while feeding in electricity when supply exceeds demand. Many businesses have taken steps to transition to renewable energy sources such as installing large onsite solar PV systems or entering power purchasing agreements for renewable power, creating benefits such as economic growth and diversification where the power is generated in regional Victoria.

Advances in large onsite battery technology also presents significant opportunities for businesses and residences in the future. Similarly, there are strong prospects for local communities to create microgrids which create additional benefits by reducing risks brought about by large scale power outages due to weather extremes.



CLIMATE ACTION IN THE COMMUNITY

Scentre Group

Scentre Group owns and operates Westfield Fountain Gate, the largest shopping centre within the City of Casey. It is pursuing a target of net zero emissions for its facilities and company vehicles by 2030. They will achieve this through the installation of onsite rooftop solar and using Internet of Things (IoT) sensors to regularly monitor temperatures to inform the building's climate control system, thereby reducing energy usage and improving comfort.

City of Casey transitioning to a net zero emissions fleet

In 2022, the City of Casey had thirteen 100 per cent electric vehicles and eighteen efficient electric hybrid vehicles in its corporate fleet. In addition, Council established the use of three 100 per cent electric hard rubbish collection trucks, which was an Australian first. Electric vehicle chargers have been installed in Bunjil Place's corporate car park, Narre Warren Works Centre, Myuna Farm, Doveton and the Cranbourne West Community Hub.

Cranbourne Solar Farm

The City of Casey is in the process of installing a 5 Megawatt solar farm on the site of the Old Casey Landfill, Cyril Beechey Lane, Cranbourne. It is anticipated that the solar farm will generate about 8.14 gigawatt/hours each year which will reduce annual carbon emissions by 8.1 kilo tonnes (kT) of carbon dioxide equivalent (CO2-e).

Streetlighting Power Purchase Agreement

In 2020, City of Casey committed to a 9.5-year Power Purchase Agreement to procure wind generated renewable energy to power its streetlights. From 1 January 2021, no net greenhouse gas emissions have been generated from all of Casey's streetlights and this wind-power is purchased at a lower cost than council previously paid for electricity derived primarily from fossil fuels. This commitment eliminates an average 13.1 kilo tonnes (kT) of greenhouse gas emissions each year over the contract term.

WHAT WE HEARD FROM THE COMMUNITY?

Many individuals indicated that they had made sound environmental and economic decisions like installing solar PV panels and purchasing green energy through their energy retailer. The community were generally very supportive of increasing the use of renewable technologies like developing a strategy for solar farms within the City of Casey.

Feedback included the need for:

- Providing adequate support for people across the community (e.g. people in rental accommodation, with low incomes, elderly residents)
- Supporting programs in conjunction with private enterprise and the community to bulk buy solar PV systems and increasing access to community electric vehicles
- Supporting businesses and areas of disadvantage to increase their uptake of renewable technologies (e.g. installation of solar PV, facilitate power purchasing agreements)
- Local information on participating in the renewable energy market
- Consideration of end-of-life for items like lithium batteries and solar panels.



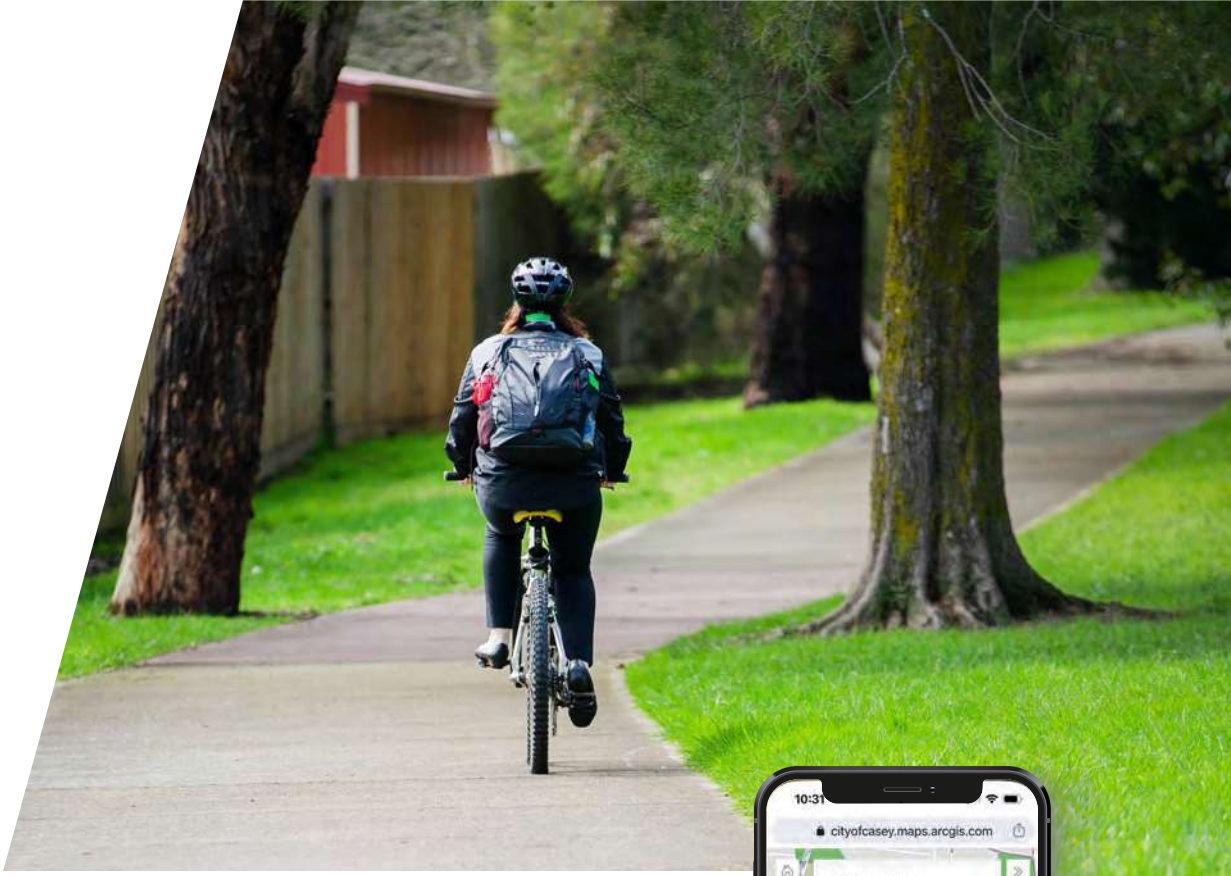
TABLE 4 - COMMUNITY ACTIONS: RENEWABLE ENERGY

Number	Community Action	Start Date	Council's Role	Cost Investment
Comm 2.1	Promote Casey's Solar Saver Program partnership with residents	2022/23	Promoter	Existing
Comm 2.2	Identify opportunities and build business cases for Community Solar Farms through power purchase agreements arrangements with the aim to achieve 10 MW of power generation for the community by 2030	2023/24	Promoter/ collaborator	Medium
Comm 2.3	Investigate and promote innovative financial mechanisms to support community investment in renewable energy and energy efficiency projects	2023/24	Promoter	Low
Comm 2.4	Investigate a rent-to-buy rooftop solar photovoltaic system program for small medium enterprise (SMEs) in Casey	2025/26	Promoter/ collaborator	Medium
Comm 2.5	Promote the uptake of Power Purchase Agreement Rooftop Solar Projects for large commercial and industrial businesses	2025/26	Promoter	Medium
Comm 2.6	Investigate community-owned Renewable Energy Programs e.g. Micro-Grids	2025/26	Promoter/ collaborator	Medium
Comm 2.7	Promote the Victorian Neighbourhood Battery Initiative to fund the feasibility and construction of a neighbourhood scale solar battery project	2028/29	Promoter/ collaborator	Medium

TABLE 5 - COUNCIL ACTIONS: RENEWABLE ENERGY

Number	Council Action	Start Date	Council's Role	Cost Investment
Council 2.1	Continue to source 100% renewable energy from a Power Purchase Agreement for Casey's streetlighting for 9.5 years	2022/23	Enabler	Existing
Council 2.2	Build council's solar PV system inventory and add to the Solar Portals to support effective operational and maintenance objectives	2022/23	Enabler	Low
Council 2.3	Install a 5kW wind turbine at Myuna Farm	2022/23	Enabler	Medium
Council 2.4	Trial battery smart load shifting at a council facility	2023/24	Enabler	Low
Council 2.5	Establish a 5MW Solar Farm within the City of Casey and enter into additional power purchase agreement for supplying council's building electricity	2024/25	Enabler	Medium
Council 2.6	Commit to installing 332kW of rooftop solar PV on council facilities over three years	2024/25	Enabler	High
Council 2.7	Achieve carbon neutral certification for council's emissions by 2030 under the 'Climate Action Carbon Neutral Standard' offsetting residual emissions	2029/30	Enabler	Medium
Council 2.8	Investigate a Rooftop Solar PV Rent-to-Buy Program or Power Purchase Agreement with council leased community and sporting club facilities e.g. bowls, tennis etc.	2023/24	Enabler	Low

TRANSPORT



There are ongoing changes to the way people travel in the City of Casey such as ride sharing and active transport such as cycling which in turn reduces traffic congestion, benefitting all those on the road. Electric and hybrid vehicles are becoming increasingly popular as well as e-bikes and scooters also proving to be appealing. Rising fuel costs will accelerate the transition from internal combustion to electric vehicles. The construction of local roads and other transport infrastructure using low carbon materials, while not as visible as other actions, will also be important.

CLIMATE ACTION IN THE COMMUNITY

Casey Walk and Ride Interactive Map

Delivering on the Walk and Ride in Casey Strategy's Vision of being a City connected by quality integrated infrastructure that supports our community to walk and ride, the City of Casey has created a walking and cycling interactive map. It provides an opportunity to reduce greenhouse gas emissions by minising car and motorbike use as well as improved health, wellbeing and liveability for our residents and visitors by providing a navigation tool illustrating the entire path network.

Along with paths and trails, the map shows complementary features such as playgrounds and dog parks people may wish to visit along their journey.

Walk-and-Ride Media App >



WHAT WE HEARD FROM THE COMMUNITY?

There is evidence of positive behaviour change amongst the community when it comes to sustainable transport with many people indicating that they are choosing to walk, cycle, carpool or take public transport instead of driving. The community feedback on this topic was emphatic particularly around the need to improve public and active transport; the transport theme received the highest number of responses as well as being ranked as the highest priority. In many responses there was not a deep understanding of the roles and responsibilities of various agencies involved in providing transport infrastructure and services, however, there was a strong desire from the community for Council to do more in this space.

Feedback included the need for:

- Advocating for improved public transport such as increasing the frequency, diversity and spread of services as well as ensuring that they can be used by commuters who find it challenging to use public transport, including the elderly or disabled or those with very young children with them
- Better parking at transport hubs like train stations
- Using renewable energy for public transport
- Improving the network of walking/cycling paths and their usability through route planning and installing features like drinking fountains, adequate lighting and bike storage
- Increasing uptake of e-bikes and scooters (subject to regulation) for example through e-scooter hire
- Providing charging infrastructure for electric vehicles that is easily accessible
- Supporting the ability for people to work from home or in hubs closer to home
- Increasing car-pooling/sharing
- Supporting the uptake of electric vehicles through mechanisms like incentives for their purchase and installation of charges in private garages
- Improving road network connectivity from housing estates to reduce the distances need to travel to reach adjoining arterial roads (too many cul-de-sacs)



TABLE 6 - COMMUNITY ACTIONS: TRANSPORT

Number	Community Action	Start Date	Council's Role	Cost Investment
Comm 3.1	Promote and encourage land use and development that supports neighbourhoods where people can live, work and access services within 20 minutes	2022/23	Promoter	Existing
Comm 3.2	Advocate for better access to public transport, including bike and pedestrian paths and pedestrian crossings at bus stops, and parking and bus services at train stations	2022/23	Advocator	Existing
Comm 3.3	Advocate for a trial of free public transport in outer Melbourne to test if cost is a factor in travel decisions and advocate for more reliable and frequent public transport	2023/24	Advocator	Existing
Comm 3.4	Advocate to improve transportation policy including improving public transport and the transition to zero emissions vehicles	2022/23	Advocator	Existing
Comm 3.5	Development of an e-mobility plan, providing strategic direction on e-mobility and identifying locations to support e-mobility across the City of Casey	2024/25	Enabler	Medium
Comm 3.6	Investigate modelling transport network emissions to inform future planning such as bus lanes	2025/26	Collaborator	Existing
Comm 3.7	Install electric vehicle charging stations at strategic locations across council facilities for community use	2026/27	Enabler	Medium
Comm 3.8	Investigate commercial opportunities to establish electric vehicle charging stations identified in SECCCA's Electric Vehicle Charging Infrastructure Road Map	2026/27	Collaborator/ Broker	Existing
Comm 3.9	Investigate a community electric vehicle bulk buy program for the city	2024/25	Enabler	Medium

TABLE 7 - COUNCIL ACTIONS: TRANSPORT

Number	Council Action	Start Date	Council's Role	Cost Investment
Council 3.1	Transition council's fleet to electric/hybrid vehicles	2022/23	Enabler	Medium
Council 3.2	Encourage contractors to select sustainable transport options through the Sustainable Procurement Policy	2023/24	Enabler	Existing
Council 3.3	Complete an assessment and business case into hydrogen fuel cell technology in the City of Casey	2024/25	Enabler	Medium
Council 3.4	Encourage council staff to embrace active transport across Casey	2024/25	Enabler	Existing
Council 3.5	Support staff to reduce emissions from commuting to work through ride sharing, use of public transport and working from home where appropriate.	2022/23	Enabler	Existing





CIRCULAR ECONOMY

Significant reductions in greenhouse gas emissions can be made through continuing to improve the way we manage the resources and materials we use. Ideally there is a focus on reducing, repairing or reusing products but inevitably there are items that need to be recovered, recycled or disposed. Food organics and garden organics generate greenhouse gases such as methane when it breaks down in a landfill so ensuring organic waste is treated as a resource by diverting into a separate stream for treatment can dramatically reduce our community emissions. Casey already diverts around 35,000 tonnes per annum of residential organic waste, largely garden organics, and is keen to increase diversion of food organics without compromising the quality of processed material.

Council has committed to improving its procurement and waste management processes through implementing actions listed in the Recycling Victoria: A New Economy (DELWP, 2020a) plan and embedding sustainability principles in its procurement processes. This can include considerations around the proportion of recycled materials, product lifespan, transport distance and recyclability. Council events and functions will continue to minimise the use of single use plastics as well as sourcing items locally that are reusable or recyclable.





CLIMATE ACTION IN THE COMMUNITY

Circular Economy Living Lab

The City of Casey's objective for waste management is to contribute towards a circular economy through waste management and resource recovery. A target of diverting 80 per cent of waste from landfill by 2030 has been set. To help achieve this, the City of Casey is establishing a Circular Economy Living Lab. Through providing resources, like funding and collaboration opportunities, people within the City of Casey with an innovative streak will be able to develop place-based solutions to test and trial in partnership with the community.

LMS Energy

LMS Energy is Australia's largest landfill biogas company. Located at the Veolia Hampton Park Landfill, the landfill is constructed of smart cells to capture greenhouse gases which are used to generate electricity.

LMS contributes enough electricity to the grid to supply power to approximately 15,800 homes.

WHAT WE HEARD FROM THE COMMUNITY?

There appears to be a strong commitment amongst local community members to practice behaviours to minimise waste. It was felt that the theme of circular economy provided actions that could be completed by every single person in the community regardless of their lifestyle. To recycle correctly, purchase second hand items, repair or repurpose items were all identified as tangible actions. There was a strong need for more support from council to provide education that would reach everyone in the community and make it clear what needs to be done by the community to reduce community emissions.

Feedback included the need for:

- Promoting networked circular economies across local businesses and amongst community members
- Providing tailored monitoring and support for businesses to improve waste management
- More accessible recycling for items like soft plastics and batteries
- More frequent updating and providing information on what items should be placed in what bin
- Additional information around the recycling process
- Considering weekly green bin (Food Organics/Garden Organics FOGO) collection
- Implementing incentives/education to increase backyard composting
- Making repairing items easier through providing facilities and expertise such as repair cafés and men's sheds.



TABLE 8 - COMMUNITY ACTIONS: CIRCULAR ECONOMY

Number	Community Action	Start Date	Council's Role	Cost Investment
Comm 4.1	Continue to drive increased uptake of the Food Organics, Garden Organics (FOGO) collection system with improved monitoring and education	2022/23	Promoter/ Educator	Medium
Comm 4.2	Trial a Circular Economy Living Lab with Casey businesses, start-up and community groups e.g. food waste, construction waste & asset utilisation	2022/23	Collaborator	High
Comm 4.3	Investigate the opportunities for repair cafés and tool libraries	2023/24	Collaborator	Low
Comm 4.4	Prepare a plan for and deliver the State-wide kerbside reforms to maximise food organics recovery	2027/28	Enabler/ Educator	Medium
Comm 4.5	Transition away from landfills to an alternate waste processing (AWP) facility	2027/28	Collaborator/ Enabler	Existing
Comm 4.6	Facilitate a Cleaner Production Program for Casey businesses to reduce emissions from wastewater disposal	2027/28	Collaborator	Medium
Comm 4.7	Develop a circular economy framework	2022/23	Enabler	Existing
Comm 4.8	Educate and encourage demolition contractors working within Casey to partner with resource recovery businesses to recycle building materials and divert waste away from landfill	2023/24	Educator/ Collaborate	Existing

TABLE 9 – COUNCIL ACTIONS: CIRCULAR ECONOMY

Number	Council Action	Start Date	Council's Role	Cost Investment
Council 4.1	Develop a guideline for the use of sustainable material in developer-led civil infrastructure projects	2022/23	Enabler	Existing
Council 4.2	Improved internal waste education to maximise Food Organics & Garden Organics (FOGO) diversion and paper/cardboard recycling in council facilities	2024/25	Educator/ Enabler	Existing
Council 4.3	Build organisational capacity for sustainable procurement practices under the procurement policy	2022/23	Enabler	Existing
Council 4.4	Establish a 2025 procurement target based on council's participation in the Eco Buy program	2022/23	Enabler	Existing



SUSTAINABLE LAND USE AND PLANNING

The City of Casey's characteristics such as its significant size, future growth and large tracts of open space, including green wedge areas provides challenges and opportunities in this space. A focus on ensuring that minimising carbon emissions is embedded in planning will create enduring benefits. Using our open spaces to store carbon through actions like strategic revegetation, limiting tree clearing and enhancing blue carbon storage such as in wetlands and coastal areas will also provide other environmental and liveability benefits. Effective management of water resources through best practice integrated water management will also help achieve outcomes in this space.

The Environment Strategy 2021-25 commits to enhancing the natural values of land within the City of Casey through increasing tree canopy cover, enhancing remnant habitats and working with Traditional Owners.



CLIMATE ACTION IN THE COMMUNITY

Blue carbon opportunities in Western Port

Deakin University's Blue Carbon Lab has undertaken a project on behalf of the Western Port Biosphere to understand and quantify the opportunities to capture carbon in coastal wetlands (saltmarshes and mangroves) through changing current management practices (fencing, removing levees, catching sediment runoff and revegetating coastlines).

Such activities will also help redress historic mangrove and saltmarsh loss, create biodiversity benefits as well as enhance local fisheries and improve resilience to coastal hazards like storm surges.

CLIMATE ACTION IN THE COMMUNITY

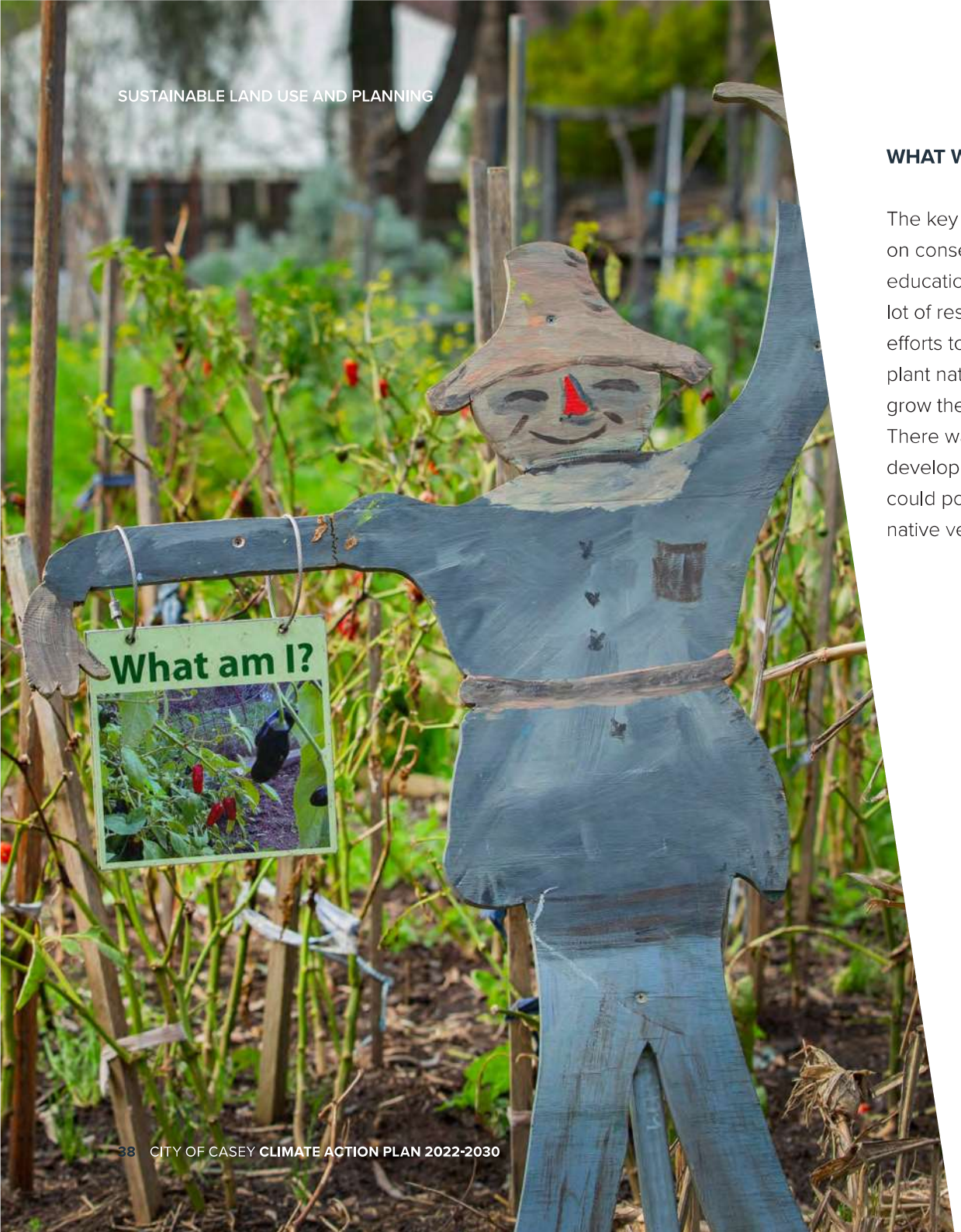
Living Melbourne targets for tree cover and Urban Forest Strategy

The City of Casey is one of forty-one organisations and councils that have endorsed Living Melbourne: our metropolitan urban forest – a bold new strategy for a greener, more liveable Melbourne.

The objectives of Living Melbourne are to set targets for tree cover, increase vegetation on private land, protect and restore species' habitats, collaborate across sectors, build a resources kit and fund the protection and enhancement of the urban forest.

Living Melbourne has set the target for 21 per cent tree canopy cover and 39 per cent tree canopy and shrub cover by 2030. This target has been adopted in Casey's Urban Forest Strategy and Environment Strategy.





WHAT WE HEARD FROM THE COMMUNITY?

The key focus for the community was on conservation, regeneration and education on sustainable land use. A lot of respondents highlighted their efforts to maintain established trees, plant native plants in their gardens or grow their own fruit and vegetables. There was concern about the development of houses in areas that could potentially be used for farming or native vegetation.

Feedback included the need for:

- Using green spaces to capture more carbon and reducing heat impacts such as planting trees on nature strips and in parks as well as further limiting land clearing
- Setting and achieving canopy cover targets
- Appropriate selection of plant species for the location like hardy native (endemic) species or fruit trees
- Encouraging residents to grow more food in their backyards and community gardens, including native foods
- Creating wildlife corridors and protecting current vegetation assets like green wedge and coastal habitats
- Undertaking best practice water sensitive urban design
- Increasing uptake of digital platforms to improve productivity and sustainability

TABLE 10 - COMMUNITY ACTIONS: SUSTAINABLE LAND USE AND PLANNING

Number	Community Action	Start Date	Council's Role	Cost Investment
Comm 5.1	Continue to provide education on the importance of the natural environment and preserving trees in residential areas	2022/23	Educator	Existing
Comm 5.2	Collaborate and empower farmers and businesses in the agricultural sector to support climate action	2025/26	Collaborator	Low
Comm 5.3	Identify opportunities for offsetting residual emissions in the community to achieve 'Climate Active' carbon neutrality certification	2028/29	Collaborator	Low
Comm 5.4	Ensure implementation of the Engineering Design and Construction Manual to increase greening of streets	2022/23	Enabler	Existing

TABLE 11 - COUNCIL ACTIONS: SUSTAINABLE LAND USE AND PLANNING

Number	Council Action	Start Date	Council's Role	Cost Investment
Council 5.1	Participate in SECCCA's 'Carbon Sink' Study and Western Port Biosphere blue carbon mapping project to identify opportunities in Casey to remove carbon from the atmosphere	2022/23	Collaborator	Low
Council 5.2	Investigate opportunities to remove carbon from the atmosphere by increasing vegetation on private properties in Casey	2023/24	Collaborator	Existing
Council 5.3	Develop a Climate Adaptation Mapping Tool to inform decision making	2026/27	Enabler	Low
Council 5.4	Develop and implement council's Urban Forest Strategy to increase tree canopy cover in Casey from 16% to 21% by 2030	2022/23	Enabler	Low



EDUCATION AND EMPOWERMENT

Many residents and businesses within the City of Casey are keen to do what they can to become carbon neutral and have been taking the initiative to undertake actions like investing in renewable energy infrastructure and sourcing local products and produce. Council and the community will also need to be prepared for the impacts of climate change which will be addressed in council's Climate Adaptation Plan. Strategy 5.1 in the Environment Strategy 2021-25 involves building organisational capacity in environmental sustainability and addressing climate change. The aim is to create a transformative mindset where council staff consider the impacts of any new project or task on council's greenhouse gas emissions.

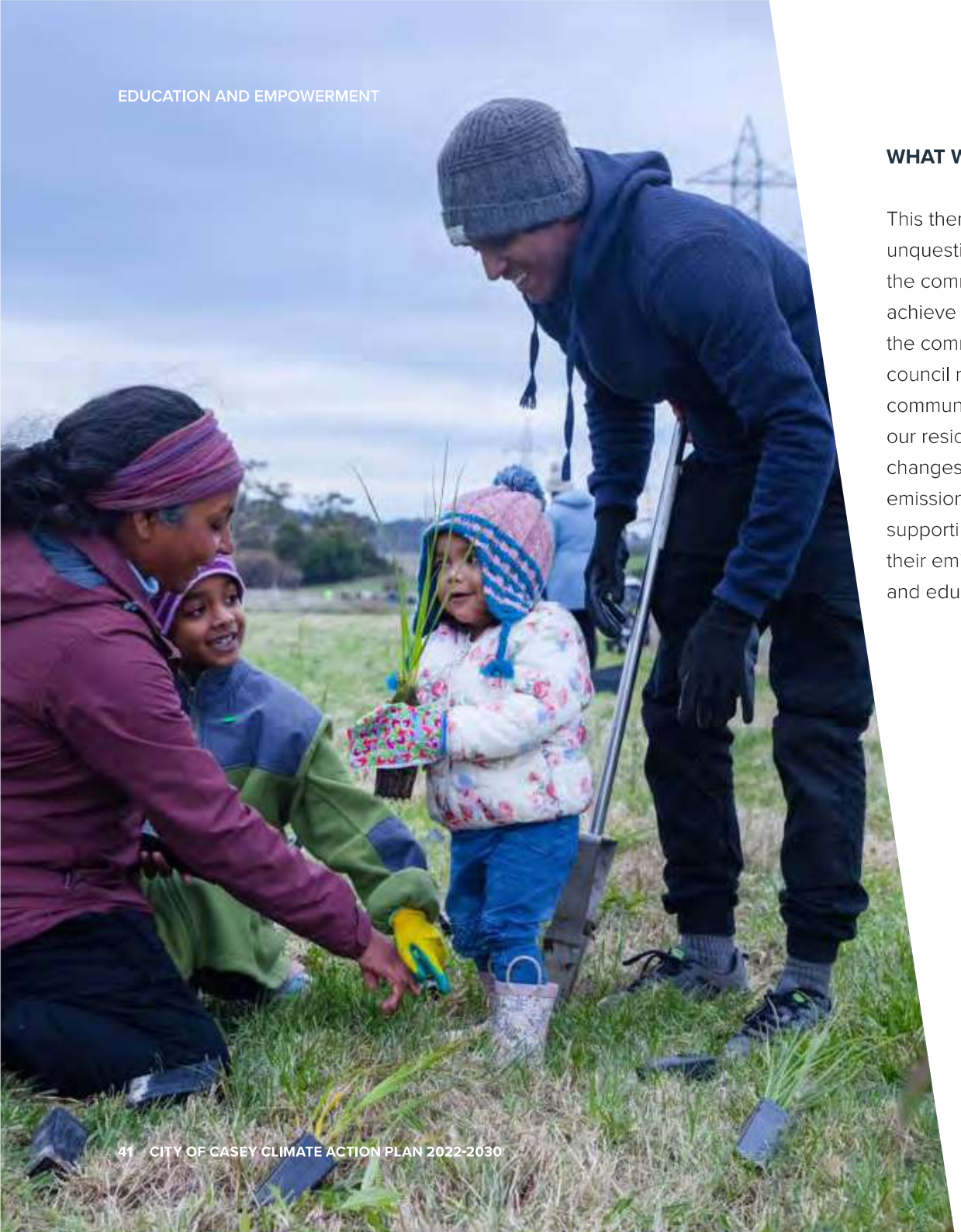


CLIMATE ACTION IN THE COMMUNITY

Myuna Farm – A sustainable past, present and future

Located in Doveton next to Dandenong Creek, Myuna Farm is a major community asset to the residents of the City of Casey. About a century ago the land was part of a dairy farm and nowadays, thanks to the efforts of community volunteers and its dedicated staff it, is a popular place for families and school groups to visit to have fun and learn about agricultural, historical and environmental topics.

A popular educational program involves students learning about waste management, renewable energy, integrated water management and sustainable building design so many of the younger residents of the City of Casey are armed with the knowledge of how and why we need to have a more sustainable future.



WHAT WE HEARD FROM THE COMMUNITY?

This theme highlights the unquestionable need for council and the community to work together to achieve net zero emissions by 2040 for the community. It was imperative that council received support from the community and to know that many of our residents are committed to making changes in their lives to reduce their emissions. Council is committed to supporting the community to reduce their emissions by providing resources and education.

Feedback included the need for:

- General education about climate change (causes and effects) and framed in a way that is not alarming or disempowering and considers the culturally and linguistically diverse (CALD) community
- Spelling out what practical actions can be done at a local/individual level (e.g. reducing energy use and waste)
- Using community-based organisations and networks like neighbourhood houses to get sustainability messaging out to the local community
- Connecting the community to encourage resilience and knowledge sharing
- More interactive approaches such as workshops and installations are preferable to disseminating information via social media and online resources
- Provision of grants and other resources to support community sustainability initiatives.

TABLE 12 - COMMUNITY ACTIONS: EDUCATION AND EMPOWERMENT

Number	Community Action	Start Date	Council's Role	Cost Investment
Comm 6.1	Maintain and manage residential, commercial and industrial greenhouse gas emissions data and key metrics in Casey's Open Data Exchange to increase understanding and innovation in the city	2022/23	Promoter	Existing
Comm 6.2	Develop and implement a community climate change education program to encourage residents to live sustainable lifestyles	2022/23	Educator	Medium
Comm 6.3	Investigate the establishment of an online resource portal to reduce emissions through improved knowledge sharing, supporting information/resources, webinars etc	2022/23	Educator/ promoter	Low
Comm 6.4	Develop a Climate Action Youth Group to support greater awareness and climate action among young people	2023/24	Collaborator	Low
Comm 6.5	Advocate to the Department of Education to increase climate change and emissions reduction education in schools and promote schools to sign up to the Resource Smart Schools Program	2023/24	Advocator	Low
Comm 6.6	Representatives from Traditional Owner Group/s and local Aboriginal Community are engaged in climate change decision-making and solutions for the City of Casey	2023/24	Collaborator	Existing
Comm 6.7	Develop a Climate Adaptation Plan	2023/24	Enabler	Low
Comm 6.8	Host a climate change summit	2024/25	Enabler/ promoter	Existing

TABLE 13 – COUNCIL ACTIONS: EDUCATION AND EMPOWERMENT

Number	Council Action	Start Date	Council's Role	Cost Investment
Council 6.1	Introduce a process to ensure that policies and strategies up for review incorporate a focus on sustainability and climate resilience	2022/23	Enabler	Existing
Council 6.2	Promote corporate sustainability achievements internally with council staff	2023/24	Promoter	Existing
Council 6.3	Introduce a process to ensure that Council Meeting and briefing reports considers sustainability and climate resilience	2023/24	Enabler	Existing
Council 6.4	Build council's capacity to monitor, manage and report on utility consumption and costs by supporting staff to use its Energy Management Platform	2023/24	Enabler	Existing
Council 6.5	Implement a climate change education program through the Staff Environment Action Leader's Group	2022/23	Enabler	Existing
Council 6.6	Develop a carbon emissions dashboard to monitor and report on corporate emission reductions	2023/24	Enabler	Existing

MONITORING AND EVALUATION

The successful implementation of the plan requires a flexible and well-informed approach to periodically determine the status and effectiveness of the entire suite of actions.

CORPORATE 2030 NET ZERO EMISSIONS MONITORING:

Council will work towards getting 'Climate Active' carbon neutrality certification >. Corporate emissions calculations will be aligned to the requirements of climate active. A dashboard with the following indicative datasets will be developed to monitor progress towards net zero corporate emissions.

- Electricity, gas and water usage for buildings, facilities streetlights etc. from retailer data
- Refrigerant emissions estimated based on number, size and age of HVAC assets
- Contractor fuel data
- Paper use
- PV electricity generation from energy retailer data
- Fuel data for council fleet and plant use
- Electricity used in EV and hybrid vehicles estimated based on kilometres travelled
- Employee commuting based on data on internal finance and human resources data
- Landfill emissions based on National Greenhouse and Energy Reporting (NGER) approach
- Building waste audit results

Given the 2030 target of net zero emissions for City of Casey operations, a mid-life detailed review in consultation with relevant staff will be scheduled for 2026. The findings of the review will be used to inform the implementation of the plan through to 2030 and the next iteration of the Environment Strategy.

COMMUNITY 2040 NET ZERO EMISSIONS MONITORING:

The estimates of community emissions will be derived from the Snapshot Community Climate Tool > which provides profiles of community emissions across Australia. It should be noted that the use of the tool comes with the risk that it will not be supported/ updated in future years which will limit the opportunities to make effective comparisons.

More detailed local data will also be used to increase its accuracy, for example:

- Energy and water data from local providers like Ausnet, United Energy and South East Water
- Transport data from Google Insights and the City of Casey's Open Data Exchange
- Travel to work and vehicle ownership per household based on census data
- Proportion of properties with renewable energy and energy efficiency measures through data published by Energy Consumers Australia, the Australian Photovoltaic Institute and other organisations
- Waste production figures through Sustainability Victoria and Recycling Victoria interactive data dashboards
- Financial contributions by the City of Casey and co-contributions by participants in sustainability grants schemes
- Outputs from City of Casey community activities (e.g. number of participants learning about sustainability practices)
- Ratio of public transport routes/stops to population as per the Public Transport Victoria open data source

The method to evaluate community emissions will be developed in consultation with SECCCA and other councils.

GLOSSARY

Adaptation: Adjusting activities and features to better cope with climate change impacts like extreme heat, floods, storms etc.

Battery smart load shifting: Electricity generated during the day is stored in a battery to be used at an alternative time to avoid using electricity from the grid. This method helps to reduce the amount of electricity you need to buy from the grid and saves you money.

Blue Carbon: The capture of carbon from the atmosphere and storing it in the world's oceans and coastal ecosystems, such as algae, seagrasses, mangroves, salt marshes and other coastal plants.

Building Management System: A computer-based system installed in a building that controls and monitors the heating, cooling, lighting, ventilation and other functions to minimise the building's energy use and maximise performance and comfort.

Carbon Neutral: A balance between the amount of carbon dioxide released into the atmosphere and the amount of carbon dioxide being removed from the atmosphere.

Carbon sequestration: Capturing and retaining carbon from the atmosphere in organic matter (trees, soil, wetland vegetation etc.).

Circular economy: A framework to address global challenges like climate change, biodiversity loss, waste, water scarcity, pollution and energy transition. It aims to transform the current linear economic model of 'take, make, and waste' into a circular economic model.

Cleaner Production Program: Reduces the operating expenses of small to medium enterprises by reducing waste, increasing product yield, improving quality and protecting the environment.

Climate Active Carbon Neutral Standard: A voluntary standard to manage greenhouse gas emissions and to credibly claim carbon neutrality and receive carbon neutrality certification.

Climate Change: Modification to global climatic (long-term weather) conditions due to the release of substantial volumes of greenhouse gases increasing the retention of heat in the earth's atmosphere.

Endemic: Native to a certain place.

E-mobility: Electro mobility includes full electric and hybrid vehicles, and any transportation that uses electricity or hydrogen to power it, including electric cars, bike, scooters, buses, trucks, etc.

ESD: Ecologically Sustainable Design involves improving the health and comfort for building occupants/users whilst minimising their environmental impact (e.g. energy usage, choice of building materials)
EV: Electric vehicle.

FOGO: Food Organics and Garden Organics.

GPC: Global Protocol for Community-Scale Greenhouse Gas Emission Inventories.

Green Bonds: Designated fixed-income bonds used to fund projects that have positive environmental or climate benefits and encourage sustainability.

Greenhouse gases: Gases like carbon dioxide, methane and nitrous oxide
Microgrid: Local energy grid that can be disconnected from the main grid to operate independently.

Mitigation: Decreasing the consequence of harm. In the context of climate change relates to reducing greenhouse gas emissions.

Net zero: Cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere through offsets.

Offset: Activity that compensates positively for the impact of a negative activity. For example, planting trees to capture the carbon that would be emitted by vehicle use.

Open Data Exchange: The City of Casey's open data exchange is an online platform used to share information to support education, innovation and provide free data to the community.

PPA: Power Purchase Agreement, is a long-term legal contract between a power producer who generates electricity and a customer who uses electricity. In some arrangements the producer installs and owns the energy system on the customer's property.

Paris Agreement: A legal binding international treaty on addressing climate change made in 2015.

PV: Photovoltaic.

Renewable energy: Energy from a source that is not depleted like wind, solar of geothermal.

Neighbourhood battery initiative: The Victorian government is providing grants for households, businesses and community groups to construct neighbourhood scale battery storage systems to store electricity generated from solar, for use at night to reduce the reliance on the grid.

Revolving Energy Fund (REF): A self-sustaining funding mechanism, which starts with seed funding being invested in a sustainable project such as energy efficiency or solar. Money saved off the electricity bill over time is paid back to the REF to finance the next project and so on.

SME: Small and medium enterprises (200 or fewer employees).

SECCCA: South East Councils Climate Change Alliance comprises nine councils in south-east Melbourne (including City of Casey) which supports member councils and communities to mitigate against and adapt to climate change through advocacy and project delivery.

TAKE2: Victorian Government initiative for government, businesses and individuals to commit to actions to reduce greenhouse gas emissions to levels set according to the Paris Agreement.

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