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Date: 12 October 2023

Community Climate Action Plan Roadmap

Alpine Shire Council



HIP V. HYPE

WHO WE ARE

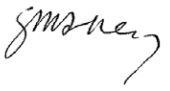

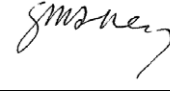
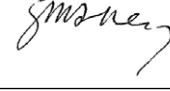
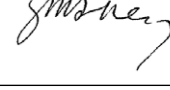
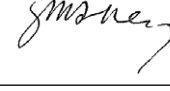
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Acknowledgement of Traditional Custodians

Alpine Shire Council acknowledges that the region known as the Alpine Shire is the traditional land of many First Nations peoples. We acknowledge all Traditional Owners as the custodians of their Country.

We acknowledge the First Nations peoples of Bpangerang, Dalka Warra Mittung, Dhuduroa Waywurru, Duduroa Dhargal, Gunaikurnai, Jaithmathang, Taungurung, and Waywurru.

We pay our respect to all Elders, past and present, and extend that respect to ancestors that guide through history and emerging leaders that will lead the way into the future.

We recognise the unique and continuous connections to Country for all First Nations peoples and thank you for sharing your lands and cultures.



Landscape of Mount Buffalo National Park (Taungurung Country). Photography from www.parks.vic.gov.au.

Executive Summary

In November 2021 Alpine Shire Council declared a **Climate Emergency**, recognising the vulnerability of the region's natural and built environment, economic prosperity and health of the community to climate change.

As part of the Climate Emergency declaration, Council committed resources to developing a roadmap for **Community Climate Action**. The objective of this Roadmap is to provide the foundation for future development of a **Community Climate Action Plan**. It is not an Action Plan in itself.

Council understands that a **Community Climate Action Plan** will be a long-term commitment. This Roadmap aims to assist in developing a clear pathway to create such an Action Plan, to support and empower the local community to reduce its emissions and adapt to a changing climate.

The Climate Context

The most comprehensive review of climate change was released by the Intergovernmental Panel on Climate Change (IPCC) in early 2023. It contains over eight years' worth of peer-reviewed science and the findings were alarming. It is clear that immediate climate action is required from the global to the local scale.

A strong climate response is a collective effort. Climate change action is needed from governments to businesses, community groups, families and individuals. Action is needed across the world to rapidly reduce greenhouse gas (GHG) emissions this decade and address both current and future climate impacts. The United Nations (UN) has recently warned we have recently entered an 'era of global boiling' and has highlighted the need to globally reach zero emissions by mid-century, including phasing out coal use by 2040.

In Alpine Shire, everyone in the community has a role to play in reducing carbon emissions and helping to ensure the local community can adapt to the impacts of a changing climate. Key to the level of community action will be Council's support.

The future **Community Climate Action Plan** will help to guide action by the community and how Alpine Shire Council can be an enabler of community based action.

The Roadmap

This Roadmap provides an overview of the local climate context and elements of a community climate response. It provides a foundational understanding for where the future **Community Climate Action Plan** can prioritise efforts for the most valuable impact and benefit.

The approach and activities to developing this Roadmap can be summarised as:

- Desktop Review including review of:
 - + Council strategic documents
 - + Local demographic information
 - + Current funding opportunities available to accelerate local action on climate change
 - + Existing **Community Climate Change Actions Plan** from other municipalities
- Community Emissions Analysis
- Climate Impacts Analysis
- Stakeholder Engagement including:
 - + Technical Foundations Meetings
 - + Community Pop-Up Stalls
 - + Community Group Meetings
 - + Community Survey
 - + Staff Workshop
 - + Council Briefing

Municipal Emissions

The free Snapshot Tool provided a starting point to examining municipal GHG emissions for the Roadmap. Some key figures from the currently available data (2020/21) include:

- Emissions from electricity associated with Residential uses account for 12% of municipal emissions
- Emissions from electricity and gas associated with Commercial and Industrial uses account for 24% of municipal emissions
- Emissions from Agricultural uses account for 32% of municipal emissions
- Emissions from Transport account for 27% of municipal emissions

The creation of a more detailed emissions inventory as part of the Action Plan development will provide additional, more granular insights.

Climate Response Goals

Council's community climate response is to be supportive and reflective of Council's existing strategic direction, namely the Community Vision and Council Plan.

As part of this Roadmap, the following goals have been established to guide Council's community climate response:

- **Goal 1: The Alpine Shire residents and businesses are supported and empowered to take climate change action**
- **Goal 2: Community adaptive capacity and resilience are strengthened**
- **Goal 3: Natural systems and physical infrastructure support our health and wellbeing**
- **Goal 4: The community will achieve zero net emissions in line with the urgent global need for carbon reduction**
- **Goal 5: Council, stakeholder and community relationships and partnerships enable collaboration and collective action**

The goals above will serve as a reference point when developing specific actions, to help ensure the Action Plan delivers on Council's strategic direction.

Action Opportunity Areas

Stakeholder engagement as part of this Roadmap explored different action opportunity areas. These categorisations provided a way to understand the most relevant areas of climate action in Alpine Shire and priorities for the community and other stakeholders. While all opportunity areas will play a role and continue to be considered as part of the Action Plan, six opportunity areas were clear priorities:

- Community Emergency Preparedness and Recovery
- Community Energy/Resilience Projects
- Standards for New Development
- Community Sustainable Transport Infrastructure
- Environmental Protection and Restoration
- Protection of Vulnerable Community Members

Building on these opportunity areas and the work to date, Council will maintain momentum by soon developing the Alpine Shire Community Climate Action Plan.

Next Steps

To build upon the Roadmap, the following recommended activities and deliverables form the basis for the development of the Community Climate Action Plan itself. These include:

- Additional supporting inputs
 - + Detailed community emissions profile
 - + Target benchmarking
 - + Defining the community role in action planning
- Action Plan development
 - + Development of Draft Action Plan (and Monitoring and Evaluation Framework)
 - + Stakeholder consultation of Draft Action Plan
 - + Refinement to develop Final Action Plan

All members of the community and other local stakeholders are encouraged to participate in the detailed action planning, to create an Action Plan which supports strong, ambitious action in the Alpine community.

Message from Councillors

It is our pleasure to present this Community Climate Action Plan Roadmap. We are excited to present this Roadmap which will inform the future development of a Community Climate Action Plan.

The health of the natural environment of our region, from our food systems to our national parks, is integral to the prosperity of our community. As the Alpine Shire's elected representatives we have a responsibility to do everything we can to protect our environment and preserve it for our future generations.

The 2019/20 bushfire season and the 2022/23 floods highlighted our vulnerability to extreme weather events. It is more important than ever that we set ambitious targets and approach climate action with determination. We are profoundly aware that the health of our planet is fundamental to our own health and wellbeing, and it is all of our responsibility to take action to protect our collective future. It is essential that we are resilient to predicted climate change scenarios through emergency management and adaptation measures.

We recognise the need for us as a community to take action to limit, and to mitigate against, the effects of climate change. We also recognise that Council is in a unique position to support our community to take climate action on a Shire-wide scale. To advocate for our community and to help coordinate and facilitate community climate action.

Through research, community consultation and collaboration we have formed this Roadmap to a Community Climate Action Plan. This is the conclusion of only the first step on what will be a long and rewarding journey that will empower the whole of our community to look forward to a healthy and prosperous future.

Climate Change in Alpine Shire

GHG emissions have been increasing rapidly for several decades, influencing the global climate and resulting in widespread climate change impacts.

The impacts from climate change related extreme weather and changed weather patterns are affecting numerous natural, physical, economic and social systems across the globe.

The context of climate change locally in Alpine Shire provides the basis for community climate action, allowing for targeted action to reduce emissions (mitigation) and respond to climate impacts (adaptation).



Family playing in the snow in Dinner Plain. Photography from www.holidayparkbright.com.au.

Climate Change in Alpine Shire

LOCAL CLIMATE IMPACTS

Understanding how climate hazards translate to the local context is a key step in understanding the exposure, vulnerability and impacts that climate hazards present for the Alpine Shire.

Within Australia, and more locally Victoria, these hazards include:

- Increased temperatures and solar radiation
- Increased extreme heat days
- More extreme storm events
- Decreased annual rainfall

Example climate impacts resulting from the above hazards include:

- Changes to habitat quality and availability
- Loss of soils / increased erosion
- Reduced water security
- Decreased snow cover and shorter snow seasons
- More stress on health and emergency services
- Increased costs for cooling/heating homes and businesses
- Loss of productivity and failure of crops
- Loss of business continuity to extreme weather events
- Increased mental health impacts
- Power outages due to increased electricity demand or damaged infrastructure

These climate impacts have been considered as part of this Roadmap and will need to be continually considered during the development of the Community Climate Action Plan.



Increased average temperatures and solar radiation



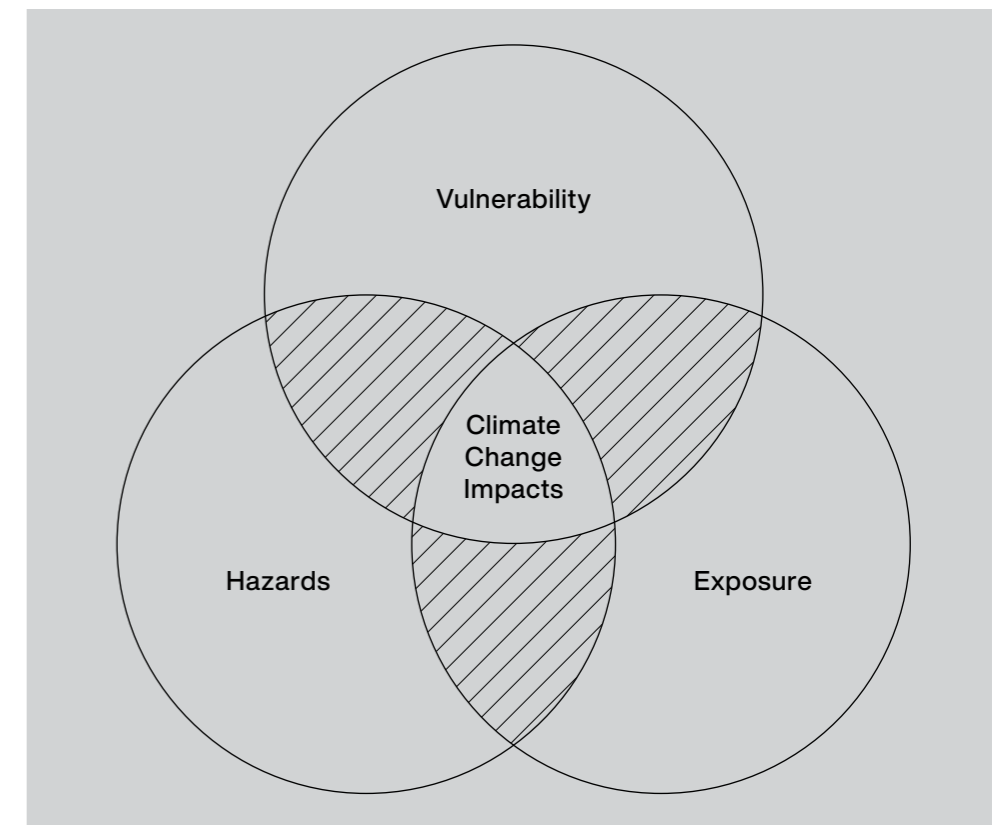
Increased extreme heat days



More extreme storm events



Decreased annual rainfall



Climate Change Risk Diagram. Image by HVH.

ALPINE SHIRE EMISSIONS

The exploration and development of effective emissions reduction opportunities must consider current community emissions in Alpine Shire, to ensure targeted action.

The following outlines currently available emissions data from the [Snapshot Tool](#). This data provided a starting point to examining municipal GHG emissions for the Roadmap.

The Snapshot data details emissions associated with Electricity and Gas (Residential, Commercial and Industrial), Transport (On Road), Waste and Agriculture. Some of the Snapshot data of a local government area's GHG emissions profile is based on portioning state level data sets.

Key figures

- Emissions from electricity associated with Residential uses account for 12% of municipal emissions
- Emissions from electricity and gas associated with Commercial and Industrial uses account for 24% of municipal emissions
- Emissions from Agricultural uses account for 32% of municipal emissions
- Emissions from Transport account for 27% of municipal emissions

The creation of a more detailed emissions inventory as part of the Action Plan development would provide additional, more granular insights.



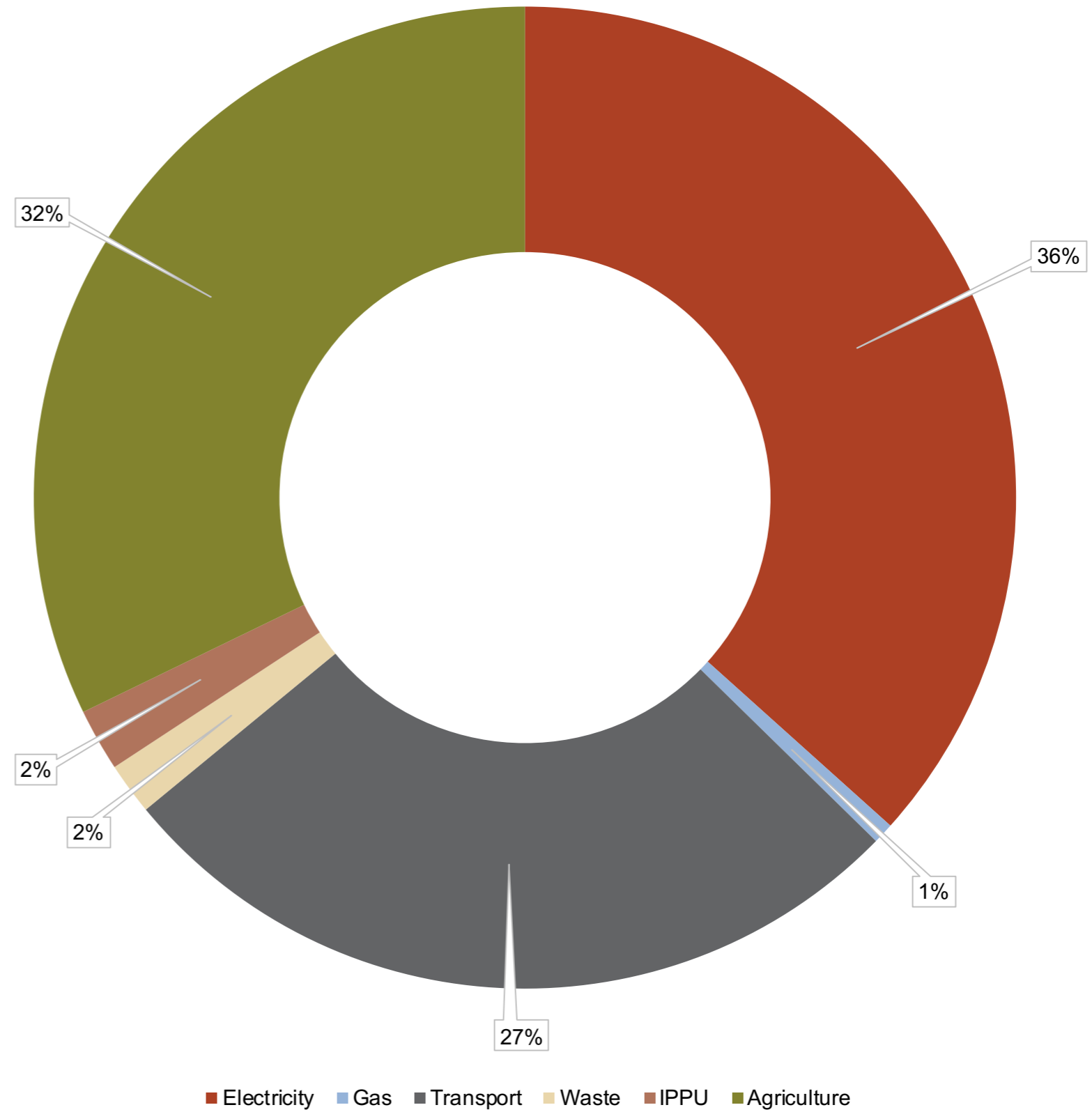
AnnaPurna Estate in Tawonga South.
Image from www.visitmountbeauty.com.au.

Climate Change in Alpine Shire

The graph to the right details Alpine Shire's municipal emissions (tonnes CO₂-e) categorised by source and sector. These figures are from the Alpine Snapshot profile 2020/21.

Total municipal emissions are 292,000 tonnes CO₂-e. In comparison, the total municipal emissions for nearby local government areas are:

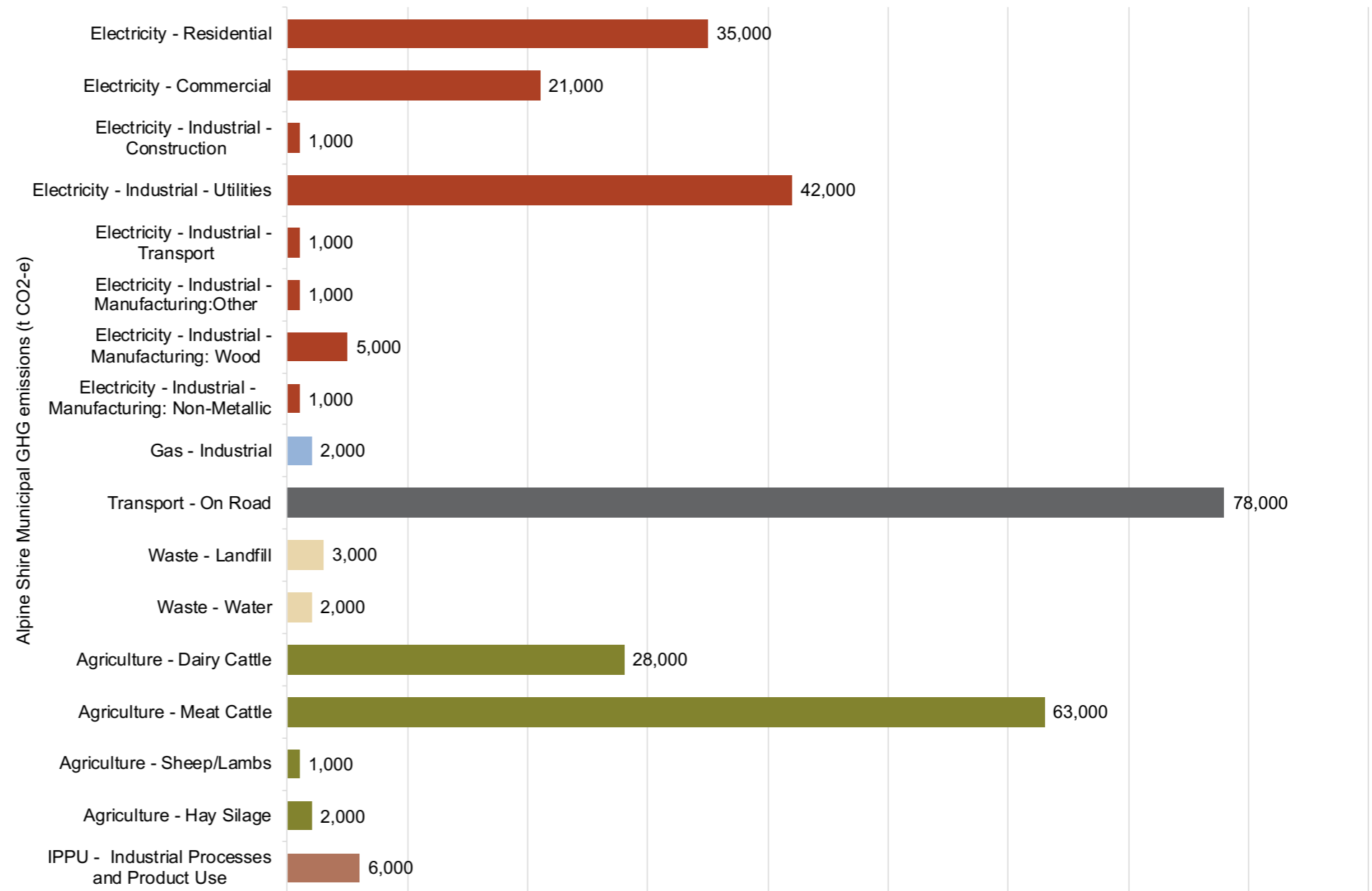
- Wangaratta: 583,000 tonnes CO₂-e
- Mansfield: 227,000 tonnes CO₂-e
- Indigo: 352,000 tonnes CO₂-e
- Wellington: 1,318,000 tonnes CO₂-e



Climate Change in Alpine Shire

The graph to the right details Alpine Shire municipal emissions (tonnes CO₂-e) categorised by source and sector.

These figures are from the Alpine Snapshot profile 2020/21.



Note: Snapshot calculates greenhouse gases emitted or sequestered through land use change, however, Land Use data is not used in the chart nor the displayed total municipal emissions. Emissions associated with Land Use were calculated by the Snapshot Tool as 5,000 tonnes. Carbon sequestration or carbon sinking is accounted for through the Land Use sector.

TOURISM TRANSPORT EMISSIONS

A limitation with the Snapshot data is that it doesn't capture transport emissions associated with tourism (i.e. those visiting Alpine Shire from elsewhere). The below provides an estimate of the potential impact of tourism transport emissions.

According to the National Visitor Survey, in the year ending September 2022, 2,285,405 trips were made to the High Country tourism region (note that this encompasses a greater geographic area than just Alpine Shire).

The following assumptions have been made to estimate total tourism transport emissions:

- 30% of the above trips were to Alpine Shire specifically
- Distance travelled based on one way from Melbourne to Bright
- Average of one vehicle per two people (i.e. per two trips)

Using standard fuel consumption figures and emissions factors, this scenario attributes 28,235 tonnes CO₂-e to tourism related transport. This is in addition to transport emissions from within the community (refer to figures in the graph on the previous page).

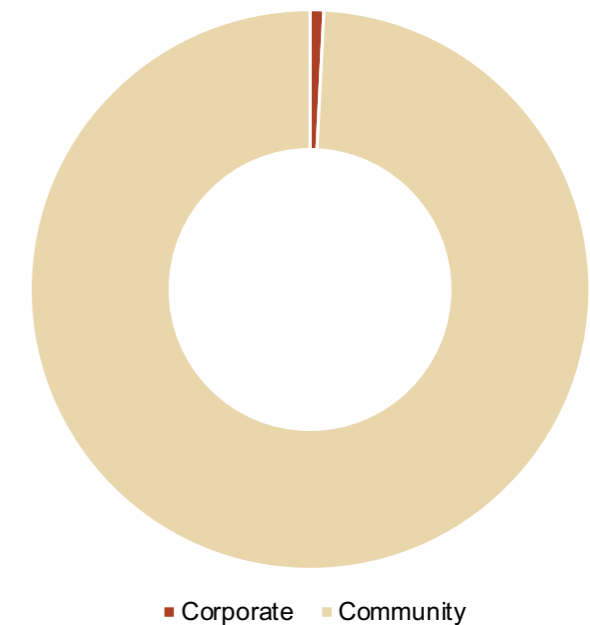
CORPORATE EMISSIONS AND COUNCIL'S CLIMATE ACTION PLAN 2021-2024

Council has an existing Climate Action Plan specifically for GHG emissions associated with Council operations, from sources such as closed landfill sites, vehicle fleet emissions, buildings and facilities energy use, streetlights and corporate waste. This Roadmap is addressing community emissions only, with the future Community Climate Action Plan to complement the existing corporate Action Plan.

Emissions from Council operations in the baseline year of 2020-2021 were 2,314 t CO₂-e. This equates approximately to less than one percent of emissions across the municipality as a whole (refer to graph below), highlighting the need for action right across the community in addition to within Council.

This data is to provide context and not to devalue the role of Council in providing leadership and demonstration for the community to take action.

Breakdown of Alpine Shire Municipal Emissions



Taking Action

Addressing climate change requires a collective effort from the global to the local scale. Climate change action is needed from governments to businesses, community groups, families and individuals.

ROLES IN CLIMATE ACTION

Federal Government

As a signatory to the Paris Climate Agreement, the Australian Government has committed to keeping global temperature rise this century well below two degrees Celsius above pre-industrial levels and to pursue efforts to limit temperature increase even further to 1.5 degrees Celsius. The federal government has committed to reduce greenhouse emissions by 43 per cent below 2005 levels by 2030.

Some key elements necessary for a Federal climate response include:

- Develop policy mechanisms and programs to rapidly reduce emissions across all sectors
- Accelerate the transition away from coal and gas, and instead support the clean energy sector and focus on developing a green, circular economy
- Facilitate collaboration across State lines to speed up action

State Government

At the State level, to respond to climate change the Victorian Government needs to:

- Rapidly reduce emissions through legislation, regulation, budgets, programs, and services
- Collaborate with local governments to adapt and build climate resilience, including strong support for the most vulnerable people in our communities

In 2017, the Victorian Parliament passed a new Climate Change Act which set out a clear policy framework and a pathway to net zero emissions by 2050. The current Victorian Government recently revised its target from 2050 to 2045 (this is yet to be legislated).

The Renewable Energy (Jobs and Investment) Act 2017 legislated renewable energy targets including 50% by 2030, with recent announcements outlining the intention to update targets to 65% by 2030 and 95% by 2035.

Additional Victorian Government strategic documents driving climate action at a State level include the Climate Change Strategy (2021), sector based Climate Change Adaptation Action Plans 2022-2026 and the Gas Substitution Roadmap (2022).

Waste emissions are partially addressed through the Recycling Victoria Strategy (2020).

Local Government

Closer to community, local government plays an important role in supporting and influencing action at a local level. To respond to climate change, Alpine Shire and other local governments need to:

- Demonstrate local leadership, reduce corporate emissions, ensure Council assets are climate resilient and embed climate action across their operations
- Continue to form alliances, create partnerships, and collaborate to deliver shared projects to scale up action
- Collaborate with and support the community to act
- Increase opportunities for community participation in local, state and federal programs and initiatives
- Collectively advocate for increased support and action from other levels of government

The remit and powers available to Victorian Local Governments are defined by the Victorian Climate Change Act 2017 and the Local Government Act 2020. The Local Government Act contains overarching principles, where Councils are required:

- To promote the economic, social and environmental sustainability of the municipal district, including mitigation and planning for climate change risks
- To give priority to achieving the best outcomes for the municipal community, including future generations

Local Community

Everyone in the Alpine Shire community has a role to play in reducing carbon emissions and helping to ensure the local community can adapt to the impacts of a changing climate. Some examples of ways the local community can participate in climate action include:

- Taking action at home
- Changing travel behaviour
- Attending workshops, information sessions and events
- Joining local environmental community groups
- Taking action with colleagues at work
- Lobbying the Federal and State Government to take action on climate change
- Participating in sustainability groups and programs run by Council
- Consuming responsibly and embracing circular economy principles and landfill avoidance practices
- Switching banking or superannuation to institutions that do not invest in fossil fuels

The future Community Climate Action Plan will detail specific opportunities for action by the Alpine Shire community, however this Roadmap highlights key opportunity areas for action.

BARRIERS TO CLIMATE ACTION

While the community may be motivated to act on climate change, there are obviously barriers to taking action. Such barriers can often be categorised as:

- Financial (e.g. too expensive)
- Time (e.g. too busy already)
- Information (e.g. not sure how to take action)

Additional barriers highlighted through stakeholder engagement included uncertainty of level of personal influence/impact, lack of support, difficulties changing habits/behaviours, personal health issues and potential inequitable distribution of State/Federal government incentives to regional areas.

The recent COVID pandemic has also had wide ranging impacts, particularly for a municipality like Alpine Shire for which tourism plays a large role. In addition, the COVID pandemic has led to further decline in volunteer numbers, including for environmental groups.

It is acknowledged that many members of the community may be preoccupied with other challenges at present.

These barriers are key consideration for how Council can be an enabler of community based action. These barriers should also be considered in the context of equity across different demographics when developing specific initiatives and 'calls to action'.

CLIMATE CHANGE ACTION

No single path or action will have sufficient impact to respond to climate change. A comprehensive climate response includes a combination of actions, including both mitigation (reducing emissions) and adaptation (preparing for and responding to climate impacts) responses.

Acknowledging that some climate changes impacts are 'locked in', key to a strong community response is taking action which builds future adaptive capacity and local resilience in the face of climate change.

Council's future Climate Change Action Plan will include a range of actions which address both mitigation and adaptation with a focus on those intervention points where community action is required at scale or can be enabled through a sharing of resources or other collaborative approach.

PAST ACTION AND ACHIEVEMENTS

Even without a dedicated Community Climate Action Plan, there has been a variety of actions undertaken and numerous achievements in recent years including:

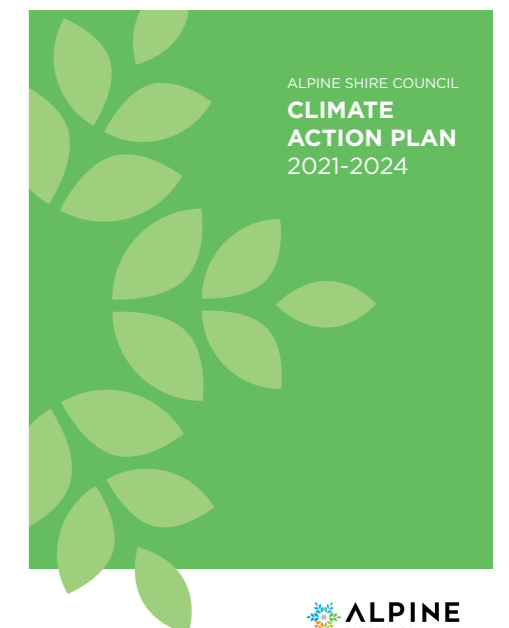
- Home energy assessment kit
- 'Dish Pig' (repurposed horse float offering reusable cups etc at events)
- Food Organics Garden Organics (FOGO) kerbside collection introduction for municipal waste
- Supporting Evie network public electric vehicle charger in Bright
- Goulburn Murray Climate Alliance (GMCA) 'Naturally Cooler Towns' joint project
- Community Energy and Electric Vehicle (EV) Charging Prospectus
- Participation in Indigo Power Community Battery PSG

The above actions relating to the community are complemented by broader enabling action and corporate initiatives including:

- Development of corporate Climate Action Plan 2021-2024
- GMCA participation
- Cities Power Partnership participation
- North East Catchment Management Authority (NECMA) Natural Resource Management (NRM) and Integrated Water Management (IWM) participation
- Victorian Energy Collaboration (VECO) Power Purchase Agreement (PPA) participation
- Solar PV on Council buildings
- Council fleet EV and chargers roll-in
- Trellis carbon accounting tool adoption
- LED streetlights upgrade



Dish pig trailer for Waste Wise Events. Image from www.alpineshire.vic.gov.au.



Cover of Council's corporate Climate Action Plan.

Council's Community Climate Response

Alpine Shire Council has responded to the challenge of climate change by declaring a Climate Emergency in 2021, adopting the corporate Climate Action Plan 2021-2024 and developing this Community Climate Action Plan Roadmap.

The future development of a Community Climate Action Plan will help to guide action by the Alpine Shire community and how Alpine Shire Council can be an enabler of community based action.

HOW THIS ROADMAP WAS DEVELOPED

This Roadmap was developed through a series of activities which sought to understand the local context and build upon existing efforts by the Alpine Shire community to tackle climate change.

The approach and activities to developing this Roadmap can be summarised as:

- Desktop Review including review of:
 - + Council strategic documents
 - + Local demographic information
 - + Current funding opportunities available to accelerate local action on climate change
 - + Existing Community Climate Change Actions Plan from other municipalities
- Community Emissions Analysis
- Climate Impacts Analysis
- Stakeholder Engagement including:
 - + Technical Foundations Meetings
 - + Community Pop-Up Stalls
 - + Community Group Meetings
 - + Community Survey
 - + Staff Workshop
 - + Council Briefing

The above activities provided the foundational understanding for where the future Community Climate Action Plan can prioritise efforts for the most valuable impact and benefit.

CLIMATE RESPONSE GOALS

Council's community climate response is to be supportive and reflective of Council's existing strategic direction, namely the Community Vision and Council Plan.

Council's Community Vision is "*Our people, places and environment enrich our area's resilience, prosperity, and sustainability.*" Strategic Drivers that are critical to achieving the community's Vision and which frame the Council Plan include:

1. *For those who live and visit: To be connected, supported, and welcomed throughout all stages of life*
2. *For a thriving economy: Ideas and industry thrive through a climate sensitive and diverse economy*
3. *For bold protection of our future: Our natural environment is protected and preserved*
4. *For the enjoyment and opportunities of our lifestyle: The connection between people and place is strengthened*
5. *For strong and informed leadership: Collaborative, bold and evidence-based decision making.*

As part of this Roadmap, the following goals have been established to guide Council's community climate response:

- **Goal 1: The Alpine Shire residents and businesses are supported and empowered to take climate change action**
- **Goal 2: Community adaptive capacity and resilience are strengthened**
- **Goal 3: Natural systems and physical infrastructure support our health and wellbeing**
- **Goal 4: The community will achieve zero net emissions in line with the urgent global need for carbon reduction**
- **Goal 5: Council, stakeholder and community relationships and partnerships enable collaboration and collective action**

The goals above will serve as a reference point when developing specific actions, to help ensure the Action Plan delivers on Council's strategic direction.

Council's Community Climate Response Action Opportunity Areas

Stakeholder engagement for the Roadmap explored broad action opportunity areas for community climate action. This categorisation provided a way to understand the most relevant areas of climate action in Alpine Shire and priorities for the community and other stakeholders.

These opportunity areas provide a starting point but may evolve as the Community Climate Action Plan is developed. Additionally, detailed and specific actions will be explored as part of the Action Plan development.

Further high level analysis of each of the 17 action opportunity areas is detailed on the following pages as part of this Roadmap.

The maximum emissions reduction potential (based on 2020/21 emissions) is listed under relevant opportunity areas. Note that some reduction potentials (e.g. for transport and waste) are addressed by multiple opportunity areas and are therefore referenced more than once.



Community pop-up stall at Bright Make It Bake It Grow It Market. Photography by Alex Faure.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Household Energy

DESCRIPTION

Energy use (and associated emissions) in households can be addressed through a range of interventions from energy efficiency measures to electrification of appliances, on-site renewable energy generation and renewable electricity procurement.

EXAMPLE ACTION

Solar panel bulk buy

Home energy assessment kits and support from community groups

Advocacy to other levels of government for promotion of suitable technology

IMPACT

Emissions Reduction Potential

Up to 35,000 tonnes (of 292,000 tonnes)

Benefits

Emissions reduction - operational

Operational costs - resource use (energy)

Indoor thermal comfort

Health and wellbeing (e.g. avoidance of gas indoors)

INDICATIVE COST

Households

Medium (varying capital cost for systems/appliances; premium per kWh for GreenPower)

Council

Low-Medium (program cost)

TIMEFRAME

Short (next 1-2 years)

STAKEHOLDER GROUP

Households

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked the fourth highest priority (27 selections as a top 5 priority) in the community survey, and is further supported by survey respondents ranking 'Taking action at home' as the most popular way to participate in climate action. Councillors however did not rank this opportunity area highly (1 selection) as one which Council is best placed to support (potentially due to limited ability to directly control the actions of existing households and the availability of State programs / rebates which address this area).

IMPLEMENTATION NOTES

Emissions reduction impact highly dependent on the scale of any program and associated uptake as well as speed of transition to renewable grid electricity.

The State Government regularly has financial incentives available to existing households. These can be leveraged to avoid duplication of effort, promoted through communications channels and community networks.

There is a link to the opportunity area of Community Energy/ Resilience Projects, and whether locally produced electricity can be a renewable energy source for households.



Rooftop solar panels on house in Bright. Image courtesy of Dennis Lambert.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Household Resilience

DESCRIPTION

Resilience at a household level can be strengthened through increased preparedness for natural hazards / emergencies and climate impacts, including those which are both acute or chronic. The ability to respond to and bounce back from emergencies and impacts is important for the livelihoods of the local community, including the longevity/security of their homes into the future.

EXAMPLE ACTION

Develop an Alpine new resident/landowner education pack with climate change information relating to flood, bushfire and environmental management

Support residents to develop their 72 hour plan

IMPACT

Emissions Reduction Potential

Adaptation focus therefore emissions reduction not the main impact

Benefits

Social capital (e.g. community networks)

Human capital (e.g. knowledge)

Safety (e.g. reduced risk of injury)

Climate hazard exposure reduction

Other benefits dependent on specifics of any initiative (e.g. flood mitigation; soil health; lower maintenance costs)

INDICATIVE COST

Households

Low-Medium (time to learn and implement improvements e.g. creating an household resilience / emergency plan)

Council

Low-Medium (program cost)

TIMEFRAME

Short (next 1-2 years)

STAKEHOLDER GROUP

Households

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was not ranked particularly highly (12 selections as a top 5 priority) in the community survey, similar to the related (but broader) opportunity area of Community Emergency Preparedness and Recovery (14 selections). It is worth noting that Councillors ranked Community Emergency Preparedness and Recovery as the highest ranked opportunity area (9 selections) for which Council is best placed to support.

IMPLEMENTATION NOTES

Given the number of stakeholders with an interest in climate resilience and preparedness, partnerships with others such as the SES and CFA will be crucial to ensure consistency of approaches and messaging, and avoid duplication of effort (particularly when it comes to community education). The Alpine Resilience Committee may support this action area.

It was noted during stakeholder engagement that different households have different levels of engagement success (e.g. regional communities versus renters and new residents). These differences should be considered during action/initiative design.

This opportunity area also links to Non-Residential Resilience and Community Emergency Preparedness and Recovery (worth exploring efficiencies in action across all). Additionally, engagement in this area tends to be highest immediately following a climate related weather event and needs to be built over time for new residents.



Material components of a residential development. Image by Sunlyt Studios.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Household Waste

DESCRIPTION

Resource recovery at a household level has evolved over the years, with the current/near future focus being on four streams: general waste, comingled recycling, Food Organics Garden Organics (FOGO) and glass recycling. More effective resource management in homes can be supported through improved separation practices to divert from landfill, in combination with reducing consumption in the first instance (e.g. avoidance).

EXAMPLE ACTION

Waste reduction education program

IMPACT

Emissions Reduction Potential

Up to 3,000 tonnes (of 292,000 tonnes) relating to landfill waste as part of waste related interventions across both residential and non-residential

Benefits

Resource recovery - diversion from landfill

INDICATIVE COST

Households

Low (time to learn and improve practices)

Council

Low (communications)

Medium (costs associated with any additional infrastructure/ service provision)

TIMEFRAME

Short (next 1-2 years)

STAKEHOLDER GROUP

Households

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (18 selections as a top 5 priority), and the fifth highest priority (17 selections) from pop-up stall engagements. Councillors however did not rank this opportunity area highly (1 selection) as one which Council is best placed to support (potentially due to limited ability to directly control the actions of existing households).

IMPLEMENTATION NOTES

There is existing Council communications to households relating to waste broadly, as well as more specifically with the rollout of Council's FOGO collection service. Ongoing refinement of these communications and service provision will be important as waste collection streams diversify.

Ongoing monitoring and evaluation of household waste practices will help to inform targeted interventions.

Council could also consider opportunities to amplify existing community passion for low-waste living by further supporting community driven initiatives as well as the circular economy initiatives already running through community groups such as Sustainable Upper Ovens.



Disposable and cloth nappies. Image from Halve Waste.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Household Transport

DESCRIPTION

Given the low density characteristics and geographically remote location of the Shire, and availability of public transport, the Alpine community is largely dependent on private vehicles. More sustainable transport choices will largely be influenced by the ability of residents to transition to electric vehicles, both from the perspective of upgrading to an electric vehicle as well as the capacity to charge at home. This is in addition to further promotion of walking and cycling as alternatives for shorter trips.

EXAMPLE ACTION

Electric vehicle transition program (drive days, residential electricity infrastructure upgrades and vehicle charger supply chain support).

IMPACT

Emissions Reduction Potential

Up to 78,000 tonnes (of 292,000 tonnes) as part of transport related interventions across both residential and non-residential

Benefits

Emissions reduction - operational

Operational costs - resource use (fuel / energy)

Travel efficiency

INDICATIVE COST

Households

High (upfront cost of purchasing electric vehicle, and purchasing and installing EV charging infrastructure)

Council

Low (communications e.g. detailing State Government incentives)

TIMEFRAME

Medium (next 5 years)

STAKEHOLDER GROUP

Households

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (18 selections as a top 5 priority) but was ranked the third lowest priority (4 selections) from pop-up stall engagements. Councillors however did not rank this opportunity area highly as one which Council is best placed to support (0 selections).

IMPLEMENTATION NOTES

This opportunity area would function in combination with broader EV charging initiatives for the community (e.g. public EV charging network).

Council are assisting the transition to electric vehicles through public charging, and the development of a community energy and electric vehicle charging prospectus. The prospectus should be utilised as part of more detailed action planning.

Any financial assistance from State or Federal Government should be leveraged given the high costs associated with households transitioning to electric vehicles and dedicated communications support may be necessary to overcome 'range anxiety' for regional travellers.



Evie electric vehicle public charging. Image by Michelle Stark.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Non-Residential Energy

DESCRIPTION

Similar to households, energy use (and associated emissions) in businesses and industry can be addressed through a range of interventions from energy efficiency measures to electrification of appliances, on-site renewable energy generation and renewable electricity procurement.

EXAMPLE ACTION

Energy audit program

IMPACT

Emissions Reduction Potential

Up to 72,000 tonnes (of 292,000 tonnes)

Benefits

Indoor thermal comfort

Emissions reduction - operational

Operational costs - resource use (energy)

INDICATIVE COST

Businesses and Industry

Medium (capital cost for systems/appliances; premium per kWh for GreenPower)

Council

Low-Medium (program cost)

TIMEFRAME

Medium (next 5 years)

STAKEHOLDER GROUP

Businesses and Industry

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked one of the lowest priorities in the community survey (8 selections as a top 5 priority) and was ranked the fourth lowest priority (6 selections) from pop-up stall engagements. This is possibly due to general residents lack of exposure to non-residential energy and understanding of the role it plays in the community emissions profile.

Councillors ranked this opportunity area somewhat in the middle (3 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Specific opportunities relating to non-residential energy can be supported by the related opportunity area of Community Energy/Resilience Projects, leveraging potential initiatives such as community renewable energy generation (e.g. solar farms or similar). This opportunity area also links to Residential Energy (worth exploring efficiencies in action across all).

The State Government regularly has financial incentives available to existing businesses. These can be leveraged to avoid duplication of effort, promoted through communications channels and community networks.

However, stakeholder engagement highlighted that often financial support isn't enough for a business to take action, that implementation support is often desired and energy action will need to offer a strong value proposition in order to gain attention for business owners amongst competing priorities.

Local business groups, including Tourism North East and Chambers of Commerce can be valuable allies.



Heat pump systems. Image by Kim Landy.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Non-Residential Resilience

DESCRIPTION

Similar to households, resilience for businesses and industry can be strengthened through increased preparedness for natural emergencies and climate impacts. The ability to respond to and bounce back from emergencies and impacts is important to minimise disruptions to business operations and to maintain viability into the future.

EXAMPLE ACTION

Adaptation planning

IMPACT

Emissions Reduction Potential

Adaptation focus therefore emissions reduction not the main impact

Benefits

Local economy (e.g. business continuity)

Human capital (e.g. knowledge)

Safety (e.g. reduced risk of injury)

Climate hazard exposure reduction

Other benefits dependent on specifics of any initiative (e.g. flood mitigation; soil health; lower maintenance costs)

INDICATIVE COST

Businesses and Industry

Low-Medium (time to learn and undertake improvements e.g. creating an adaptation or Business Continuity Plan)

Council

Low-Medium (program cost)

TIMEFRAME

Long (next 10 years)

STAKEHOLDER GROUP

Businesses and Industry

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked the lowest in the community survey (6 selections as a top 5 priority) and the lowest priority (2 selections) from pop-up stall engagements. Similarly, Councillors did not rank this opportunity area highly as one which Council is best placed to support (0 selections).

IMPLEMENTATION NOTES

Pro-active education has the opportunity to improve resilience of businesses and industry. However, consideration for any education will need to consider differences between industries, acknowledging how they may differently impacted.

In addition to physical aspects of resilience (e.g. continuity of operation during disruption to the main power grid), some industries may also need to consider long-term viability and how their business may need to evolve or shift (e.g. Alpine Resorts with variable snow seasons).

Focusing this opportunity area on locations with electricity network resilience effort or other specific problems to solve, may improve traction.



Falls Creek chair lift. Image from www.visitmelbourne.com.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Non-Residential Waste

DESCRIPTION

Similar to households, the near future focus of resource recovery for businesses and industry will be on the four streams of general waste, comingled recycling, Food Organics Garden Organics (FOGO) and glass recycling. However, additional streams specific to different non-residential processes should be considered, whether from the perspective of recycling or reuse.

EXAMPLE ACTION

Local circular economy network development.

IMPACT

Emissions Reduction Potential

Up to 3,000 tonnes (of 292,000 tonnes) relating to landfill waste as part of waste related interventions across both residential and non-residential

Significant additional embodied carbon emissions (impacted both within and outside Alpine Shire).

Benefits

Resource recovery - diversion from landfill

Local economy (e.g. sharing/trading of resources through local network)

INDICATIVE COST

Businesses and Industry

Medium (resourcing/effort associated with diversifying recovery streams)

Council

Low (communications)

Medium (specific program cost)

TIMEFRAME

Long (next 10 years)

STAKEHOLDER GROUP

Businesses and Industry

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (18 selections as a top 5 priority), and similarly ranked in pop-up stall engagements (11 selections). Councillors did not rank this opportunity area highly (1 selection) as one which Council is best placed to support, possibly due to non-residential waste often being managed by private contractors.

IMPLEMENTATION NOTES

It is likely that current ways which Council supports the non-residential sector in relation to waste management caters more so to smaller businesses.

One specific opportunity is encouraging the uptake of FOGO kerbside collection by businesses, which is currently opt-in.

Consideration of ways to support larger businesses and industry will potentially require more exploration (particularly for non-core streams), likely over the longer term. One barrier to establishing reuse and sharing opportunities for industries in Alpine Shire compared to an inner city municipality may be the lower density and diversity of businesses in the region, resulting in decreased efficiencies for collection of non-core waste streams.

Council can lead by example and support a circular economy by purchasing products with recycled content.



Reuse of reclaimed timber. Image from HV.H.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Non-Residential Transport

DESCRIPTION

Similar to households, given the low density characteristics and geographically remote locations of the Shire, vehicle based transport is integral to many business and industries. More sustainable transport choices will largely be influenced by the ability of the non-residential sector to transition to electric vehicles, largely from the perspective of upgrading to alternatives (both passenger as well as heavy vehicles).

EXAMPLE ACTION

Electric vehicle transition program (drive days, residential electricity infrastructure upgrades and vehicle charger supply chain support).

IMPACT

Emissions Reduction Potential

Up to 78,000 tonnes (of 292,000 tonnes) as part of transport related interventions across both residential and non-residential

Benefits

Emissions reduction - operational

Operational costs - resource use (fuel / energy)

Travel efficiency

INDICATIVE COST

Businesses and Industry

High (upfront cost of purchasing low-emissions vehicle, and purchasing and installing EV charging infrastructure)

Council

Low (communications e.g. detailing State Government incentives)

TIMEFRAME

Medium (next 5 years)

STAKEHOLDER GROUP

Businesses and Industry

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked in the lower half of priorities in the community survey (11 selections as a top 5 priority) and the second lowest priority (3 selections) from pop-up stall engagements. Councillors did not rank this opportunity area highly (0 selections) as one which Council is best placed to support.

IMPLEMENTATION NOTES

Council are assisting the transition to electric vehicles through public charging, and the development of a community energy and electric vehicle charging prospectus.

While the market for electric passenger vehicles is slowly expanding, electric options for heavy vehicles are currently limited. This should be considered as a potential limitation for the ability of industry to transition to electric vehicles in the short to medium term.

Any financial assistance from State or Federal Government should be leveraged given the high costs associated with transitioning to electric vehicles.

The tourism industry may represent an ideal focus for supporting reductions in emissions from visitor travel.



Electric passenger vehicle charging. Image from www.evse.com.au.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Agriculture

DESCRIPTION

Action related to agriculture can include adaptation measures relating to the industry and its land use, with the aim of sustaining both the industry and the natural environment in a changing climate (e.g. soil health; water availability). Emissions can also be addressed from a general business operations perspective, as well as those emissions specifically associated with livestock.

EXAMPLE ACTION

Knowledge sharing network for livestock farmers

IMPACT

Emissions Reduction Potential

Up to 94,000 tonnes (of 292,000 tonnes)

Benefits

Emissions reduction - operational

Operational costs - resource use (energy)

Local economy (e.g. business continuity)

Human capital (e.g. knowledge)

Climate hazard exposure reduction

Other benefits dependent on specifics of any initiative (e.g. soil health; water security)

INDICATIVE COST

Businesses and Industry

Low-High (highly dependent on intervention)

Council

Low-Medium (communications; program cost), noting Council not ideally placed to lead program delivery for agriculture.

TIMEFRAME

Long (next 10 years)

STAKEHOLDER GROUP

Businesses and Industry

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (19 selections as a top 5 priority) and mid-range priority (9 selections) from pop-up stall engagement. Councillors did not rank this opportunity area highly (0 selections) as one which Council is best placed to support.

IMPLEMENTATION NOTES

Agriculture plays a large role in the Alpine Shire context, both from the perspective of economic contribution as well as emissions. Action therefore should target both adaptation and mitigation outcomes, with exploration of initiatives which can address both.

Given cattle are the largest contributor to agricultural emissions, methane reduction opportunities will be a necessary consideration. It should be noted that such interventions are in the early days, with variable success rates. Partnering with other organisations/bodies (e.g. current investigation by NECMA) will be important, as will staying abreast of developments in this space.

A more beneficial shorter term focus would likely be adaptation measures for the farming sector, including amplifying environmental regeneration efforts such as with Landcare (aligned to carbon sequestration and improved natural system resilience).



Apple orchard. Image by Apple and Pear Australia Ltd via Flickr.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Standards for New Development

DESCRIPTION

New development can achieve positive outcomes across a range of sustainability categories such as energy and water efficiency, indoor environment quality and urban ecology. Whether at the subdivision or building scale, influencing the design at the planning stage provides the ability to embed sustainability into local housing from the outset.

EXAMPLE ACTION

Environmentally Sustainable Development (ESD) standards in the Planning Scheme

IMPACT

Emissions Reduction Potential

Avoided emissions associated with new housing stock

Benefits

Health and wellbeing

Amenity and liveability

Indoor thermal comfort

Connection to nature

Emissions reduction - operational

Potable water reduction

Stormwater quality improvement

INDICATIVE COST

General Community

Low-Medium (variable capital costs depending on design intervention, noting that some will have return-on-investment such as solar panels)

Council

Medium (resourcing to implement), most likely through planning scheme mechanisms.

TIMEFRAME

Short (next 1-2 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as the third highest priority in the community survey (29 selections as a top 5 priority) and the fourth highest priority (18 selections) from pop-up stall engagements. Councillors ranked this opportunity area the second highest (6 selections) of opportunities where Council is best placed to support.

The impact of new subdivision development was regularly highlighted by community members during stakeholder engagement.

IMPLEMENTATION NOTES

Council are currently participating in the Sustainable Subdivisions Framework (SSF) Trial and should continue to provide resourcing to this through the GMCA. This is particularly important given the scale of impact subdivisions can have, particularly for the Alpine Shire context. This advocacy work through collaboration aims to hasten the speed by which ESD planning scheme amendments are adopted.

A local ESD planning policy would complement outcomes through the SSF by addressing built form on a smaller scale. Using building approvals as a metric for new housing, it can be seen that an average of 92 dwellings per year were approved over the past 5 years. While an ESD planning policy would not capture all of these dwellings (e.g. not single dwellings), it would play a role in improved ESD standards in local housing stock. Note that the Victorian Government is currently developing statewide ESD provisions however the rollout timeframe is uncertain, hence why local councils have adopted their own policy in the meantime.

The recent announcement of a residential gas ban for new dwellings is another implementation consideration.



Community open space in Elmwood development in Wodonga. Image sourced from Elmwood Living.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Community Emergency Preparedness and Recovery

DESCRIPTION

Resilience at a community level can be strengthened through increased preparedness for natural emergencies and climate impacts, including those which are both sudden and gradual. The ability to respond to and bounce back from emergencies and impacts is crucial for all members of the community but can be more critical for certain sub-sections of the population who have greater vulnerabilities (e.g. are isolated; have health issues; have dependency on others).

EXAMPLE ACTION

Resilience / disaster planning education program

IMPACT

Emissions Reduction Potential

Adaptation focus therefore emissions reduction not the main impact

Benefits

Health and wellbeing

Social capital (e.g. community networks)

Human capital (e.g. knowledge)

Safety (e.g. reduced risk of injury)

Climate hazard exposure reduction

Other benefits dependent on specifics of any initiative (e.g. flood mitigation)

INDICATIVE COST

General Community

Low-Medium (time to learn and implement improvements)

Council

Low-Medium (program cost)

TIMEFRAME

Short - Medium (next 1-5 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (14 selections as a top 5 priority), however, was the highest priority (22 selections) from pop-up stall engagements. Councillors ranked this opportunity area the highest (9 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Stakeholder engagement highlighted the difficulties engaging on hazards which have not occurred recently or have not affected certain sub-sections of the community (e.g. new residents). A balance between current and future priorities, which have the ability to change over time, will be required.

Stakeholder engagement highlighted that continued multi-agency effort is important for targeted education.

Insights from the staff workshop held as part of the Roadmap development highlighted a range of specific vulnerabilities in the community and areas of exposure in the Shire. For any future action, these should be used as a starting point for targeted focus or to determine efficiencies in messaging or outreach.

This opportunity area would be ideal for exploration of Traditional Owners partnerships, including relating to land management practices which improve natural system resilience.

This opportunity area also links to Residential Resilience and Non-Residential Resilience opportunity areas (worth exploring efficiencies in action across all).



Alpine Shire Council Emergency Response Trailer. Image supplied by Council.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Community Capacity Building

DESCRIPTION

The ability for community members to take action is often influenced by the level of knowledge or skills they hold. Training which aims to reduce this barrier, with a focus on leadership and communication, can facilitate greater action within local community networks.

EXAMPLE ACTION

Leadership training

IMPACT

Emissions Reduction Potential

Depending on the focus/interest area of participating community members

Benefits

Social capital (e.g. community networks)

Human capital (e.g. knowledge)

Other benefits dependent on focus/interest area of participating community members

INDICATIVE COST

General Community

Low-Medium (time to participate in program and undertake follow through actions)

Council

Low-Medium (cost to run a training program dependent on whether Council establish and manage in-house, leverage partnerships with other organisations or seek external funding), noting other stakeholders other than Council may have program delivery capacity worth leveraging

TIMEFRAME

Medium (next 5 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as one of the lower priorities in the community survey (8 selections as a top 5 priority) and mid-range priority (12 selections) from pop-up stall engagements. Councillors ranked this opportunity area as the equal third highest (4 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Existing approaches or initiatives for community capacity building, particularly in the local context, should be evaluated for success to understand how any future capacity building initiative could operate.

Utilising the knowledge and skills of different organisations to help deliver a program/training, in addition to capitalising on any external funding, can help distribute the resourcing burden for delivery.

Recruitment of community members to any program will be a key consideration, as participants will ideally have strong existing networks within the local community from which they can mobilise action. Such participants can then act as 'community champions'.

Community capacity building could extend to opportunities for the training/upskilling of tradespeople to support the shift to zero emissions homes and businesses (e.g. skilled trades in installing solar panels, EV chargers, batteries etc). There may be a role advocating for local training opportunities.



Bright Rotary Gala Day Market. Image from www.visitbright.com.au.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Community Group Support

DESCRIPTION

Community groups can be significant drivers behind local action, whether it is setting up their own initiatives or advocating for greater action by others. Community groups most commonly rely on volunteer resourcing and capacity, therefore targeted support can reduce barriers, energise members and help maintain momentum for community action.

EXAMPLE ACTION

Governance support for environmentally focused community groups.

IMPACT

Emissions Reduction Potential

Depending on the focus/interest area of community group

Benefits

Depending on the focus/interest area of community group

INDICATIVE COST

General Community

Low (existing time i.e. likely already being spent by community groups developing grants)

Council

Low-Medium (staff resourcing to support depending on type/level of support offered)

TIMEFRAME

Short (next 1-2 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as one of the lower priorities in the community survey (8 selections as a top 5 priority) and mid-range priority (8 selections) from pop-up stall engagements. Councillors ranked this opportunity area somewhat in the middle (2 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Community group support can vary depending on the needs of different groups and projects. One example raised during stakeholder engagement as a barrier for groups was navigating the complexities of grants. Other challenges raised include resourcing (e.g. ongoing volunteer capacity) and expertise (i.e. some may be passionate about the objective but not have the technical basis).

Given the varying needs of different groups, support from Council will need to be tailored, and a 'one size fits all' approach may not be suitable.



Myrtleford & District Landcare & Sustainability Group. Image from Facebook.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Community Energy/Resilience Projects

DESCRIPTION

Community energy/resilience initiatives can range from community battery networks to community solar farms, microgrids and Virtual Power Plants. Such initiatives can help communities increase the amount of local renewable energy generation capacity and reduce reliance on the main power network.

EXAMPLE ACTION

Coordinated Shire wide community battery network

IMPACT

Emissions Reduction Potential

Dependent on the users connected to local generation

Benefits

Emissions reduction - operational

Social capital (e.g. community networks)

Human capital (e.g. knowledge)

Climate hazard exposure reduction

INDICATIVE COST

General Community

Medium (time to develop proposals etc)

Council

Low-Medium (resourcing to support/facilitate)

TIMEFRAME

Short - Medium (next 1-5 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as the highest priority in the community survey (34 selections as a top 5 priority) and the equal second highest priority (21 selections) from pop-up stall engagements. Councillors ranked this opportunity area as the equal third highest (4 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

This opportunity area intersects with other opportunity areas such as Community Group Support and Community Capacity Building.

Where community driven energy/resilience projects or ideas exist, it is important for Council to continue to strengthen the relationships with the community members behind them. Currently, Council is supporting community groups putting forward Council facilities for grant funding for neighbourhood batteries.

The costs for community scale assets (e.g. batteries; solar panels) are best covered by State or Federal funding rather than local government. Equally, Council human resource investment in community energy initiatives should be approached cautiously due to the high level of technical expertise involved.

This opportunity area also related to Household Energy and Non-Residential Energy (i.e. locally produced electricity as a renewable energy source).

Several local community energy groups are well placed to lead these initiatives, with targeted external support.



Fitzroy North Community Battery. Image by Alice Mulleeney.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Community Sustainable Transport Infrastructure

DESCRIPTION

Sustainable transport infrastructure can support the shift from private vehicle based travel. The provision of infrastructure allows for a greater diversity of choices, whether that is local active travel, use of public transport or the shift to electric vehicle options.

EXAMPLE ACTION

Public electric vehicle charging network

IMPACT

Emissions Reduction Potential

Up to 78,000 tonnes (of 292,000 tonnes) as part of transport related interventions across both residential and non-residential

Benefits

Health and wellbeing

Emissions reduction - operational

Operational costs - resource use (fuel / energy)

Travel efficiency

INDICATIVE COST

General Community

Low (largely a choice of transport mode)

Council

Low (advocacy)

Medium (upfront cost of purchasing and installing EV charging infrastructure for public use by the community)

TIMEFRAME

Medium (next 5 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (19 selections as a top 5 priority) and the fifth highest priority (15 selections) from pop-up stall engagements. Councillors ranked this opportunity area somewhat in the middle (2 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Active travel programs and infrastructure (e.g. cycle paths) are relatively simple actions Council can take to provide greater local travel options.

However, incentivising sustainable travel over larger distances requires greater infrastructure (e.g. public EV charging) and in a coordinated manner. This is particularly important for creating a comprehensive EV charging network across the broader region, which will require ongoing partnerships. Council are assisting the transition to electric vehicles through public charging, and the development of a community energy and electric vehicle charging prospectus. Council can support lease of land by commercial EV charging providers for installation of public chargers across the Shire.

Public transport improvements (e.g. better train-bus connections; greater frequencies) will rely on continued advocacy by Council.



Myrtleford Mosaic Trail. Image from www.walkingmaps.com.au.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Schools

DESCRIPTION

Education plays an important role in behaviour change and climate action, with schools providing a dedicated environment for educating younger members of the community.

EXAMPLE ACTION

Climate education program

IMPACT

Emissions Reduction Potential

Less tangible emissions reduction potential

Benefits

Human capital (e.g. knowledge)

INDICATIVE COST

General Community

Low (time if education led by community volunteers)

Council

Low (resourcing to support/deliver)

TIMEFRAME

Medium (next 5 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as a mid-range priority in the community survey (12 selections as a top 5 priority) and mid-range priority (12 selections) from pop-up stall engagements. Councillors ranked this opportunity area somewhat in the middle (3 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Stakeholder engagement highlighted the opportunity for volunteer community members to deliver education in schools. While this would reduce Council resourcing associated with content delivery, this would still require Council resourcing to coordinate.

Topics for education could vary but should be selected based on the most benefit to an age group. For example, disaster ready education is likely to have the highest impact across all, whereas climate advocacy only for older students..

Alternatives to education sessions is leveraging schools communications channels (e.g. newsletters) to disseminate information to families.



Tools at CERES vegetable garden. Image by Kim Landy.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Environmental Protection and Restoration

DESCRIPTION

The natural environment is a key element of Alpine Shire, with the local natural assets an attractor for both residents and visitors. Preservation of the natural environment can range from revegetation works on public land and restoration on private land to protection of the land and waterways from adverse impacts (e.g. inappropriate land use; overdevelopment).

EXAMPLE ACTION

Private land restoration works program

IMPACT

Emissions Reduction Potential

Potential sequestration benefit depending on level of revegetation and protection of existing vegetation

Benefits

Biodiversity and habitat enhancement

Vegetation health

Soil health

Stormwater quality improvement

Amenity and liveability

INDICATIVE COST

General Community

Low-Medium (time to undertake works)

Council

Low-Medium (time and cost to undertake or support works), noting Council may not be best placed to lead protection and restoration initiatives.

TIMEFRAME

Short (next 1-2 years)

STAKEHOLDER GROUP

General Community

STAKEHOLDER ENGAGEMENT ALIGNMENT

This opportunity area was ranked as the second highest priority in the community survey (32 selections as a top 5 priority) and the equal second highest priority (21 selections) from pop-up stall engagements. Councillors ranked this opportunity area somewhat in the middle (2 selections) of opportunities where Council is best placed to support.

IMPLEMENTATION NOTES

Expanding partnerships with other organisations (e.g. NECMA) and community groups (e.g. Landcare groups) have the potential to create coordinated and targeted action for priority natural environment initiatives in the Shire.

Consultation with Traditional Owners should be a focus for Council, with an effort for more collaborative land management into the future.

Volunteers play a large role in community based action (e.g. planting days) however consideration for how community members can be mobilised to contribute, and on an ongoing basis, is needed.

This opportunity area would be ideal for exploration of Traditional Owners partnerships, including relating to land management practices which improve natural system resilience.

One barrier raised during stakeholder engagement was that it can be difficult for volunteers to work on public land due to permits/regulations, with Council playing a role in providing permissions.



Morses Creek in Bright. Image by Nick Chester.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

First Nations and Traditional Owner Engagement

DESCRIPTION

Climate Change has a profound impact on First Nations peoples, not only economically but culturally and spiritually. Through the creation of a Community Climate Action Plan, Council looks to meaningfully engage with First Nations peoples and Traditional Owner groups, with respect for their cultural values, knowledge and practices and to collaborate with First Nations peoples to restore Country.

This engagement seeks to collaborate both with registered and non-registered Traditional Owners and all First Nations Peoples with a vested interest in the lands and waters of the Alpine Shire area. Council recognises First Nations peoples and Traditional Owner groups of the Alpine Shire have Traditional Owner Rights, as well as their own commitments to caring for Country and their own plans for the best way to heal country, based on tens of thousands of years of traditional knowledge and practices.

EXAMPLE ACTION

Co-development of a Land and Waterway Management Strategy with Traditional Owner groups and First Nations peoples who have a vested interest in the Alpine Shire.

Collaborating with First Nations peoples and Traditional Owner groups throughout the Community Climate Action Plan process, though representation by First Nations peoples and Traditional Owner groups on a Community Climate Action Plan Forum.

IMPACT

Preserving the rights and objectives of First Nations peoples and Traditional Owner groups in climate change action

Ensuring the equitable distribution of the positive outcomes of mitigation actions

Benefits

Respecting and strengthening First Nations peoples connection to country

Creating collaborative ways to engage with indigenous perspectives and knowledge in restoration of Country

INDICATIVE COST

General Community

Medium - Cost to Traditional Owner corporations and First Nations individuals for their participation

Council

Low-Medium – Costs associated with facilitating collaboration. Noting the potential cost savings inherent in developing a more robust and successful land development strategy that ensures the future prosperity of all.

TIMEFRAME

Long (Ongoing)

STAKEHOLDER GROUPS

Traditional Owner corporations (in alphabetical order): Bpangerang Aboriginal Corporation, Dalka Warra Mittung Aboriginal Corporation, Dhuduroa Waywuru Nations Aboriginal Corporation, Duduroa Dhargal Aboriginal Corporation, Gunaikurnai Land and Waters Aboriginal Corporation, Jaithmathang Traditional Ancestral Bloodline Original Owners (TABOO) First Nation Aboriginal Corporation, Taungurung Land and Waters Council and Waywuru (Pallanganmiddang).

IMPLEMENTATION NOTES

Council seeks to assist First Nations Peoples in their self determination, by respecting their primacy over Country.

In delivering Community Climate Action Plan outcomes, Council will take every opportunity to ensure First Nations People are included in any economic opportunities in the renewable energy industry or carbon market.

Engagement planning and delivery should consider implications such as timing and resourcing, to ensure Traditional Owner groups have the capacity to be meaningfully involved.



Ovens River near Bright. Image by Nick Chester.

Council's Community Climate Response

Action Opportunity Areas

ACTION OPPORTUNITY AREA

Protection of Vulnerable Community Members

DESCRIPTION

Some members of our community are more vulnerable to the adverse effects of climate change due to factors such as age, socio-economic status, cultural background, gender, disability, and physical isolation.

EXAMPLE ACTION

Conduct a study into the effects of climate change on vulnerable communities, to inform the direction of community climate action.

Inclusion and representation for vulnerable communities throughout the Community Climate Action Plan process, through representation and advocacy on a Community Climate Action Plan Forum.

IMPACT

Public health services and other public services

Homelessness

Community wellbeing

Employment

Benefits

Savings to public health and other public services

Protection of vulnerable communities

Housing and employment security

Thriving economy

INDICATIVE COST

Households

Low-Medium – Investment in research/outcomes

Business and Industry

Low-Medium – Staff are enabled to remain in the Shire

Council

Low-Medium – Public services are not strained

TIMEFRAME

Long (next 10 years)

STAKEHOLDER GROUPS

Vulnerable community members, representative groups, community health and other services

IMPLEMENTATION NOTES

Council can build on the extensive research done to date on the exposure of vulnerable communities to the effects of climate change statewide, as well as conducting further research into the locally specific challenges presented in our Shire. Some threats posed by climate change that are magnified by the inherent vulnerability of some community members include temperature vulnerability, air pollution and a lack of ability to recover from natural disasters.

Insights from the Roadmap development highlighted a range of specific vulnerabilities in the community and areas of exposure in the Shire. For example, Dinner Plain has increased risk due to its physical isolation and dependence on fuel sources transported there.

A clear picture of the threats different groups within our community face due to climate change will inform what actions need to be taken in order to ensure equitable outcomes for our whole community.



Landslide at Bogong Village impacting transport network and livelihoods. Image from Emergency Management Victoria via ABC News.

Next Steps

The objective of this Roadmap is to provide the foundation for the future development of a Community Climate Action Plan, providing a clear pathway to create such an Action Plan.

This section outlines next steps for the development of a Community Climate Action Plan. This includes suggested activities and deliverables which can form the basis of a brief / scope of works, as well as considerations such as resourcing for the development of an Action Plan.

ADDITIONAL SUPPORTING INPUTS

Detailed community emissions profile

The Roadmap phase was supported by the free Snapshot Tool which provides a starting point to examine municipal GHG emissions. To underpin the Action Planning phase, a more detailed community emissions profile is required, built on a 'bottom up approach' which uses the most locally relevant data sets where they are available.

This detailed community emissions profile will support a more robust understanding of emissions sources and contributions in Alpine Shire, and allow for detailed actions to be more targeted and monitored over time with confidence.

The development of a detailed community emissions profile will take place prior to the commencement of the detailed action planning.

Target benchmarking

Alpine Shire is considering the role targets can play in driving action and supporting accountability. A community target will be considered as part of Action Plan development. This topic was explored as part of the Roadmap's community engagement online survey, with results summarised below:

- 72% of respondents supported consideration of a community emissions reduction target
- 59% of respondents said they would support community input to achieve an emissions reduction target and understand there may be community financial investment required
- 65% of respondents believed the scale of commitment for a community emissions reduction target would be commitment by the whole community, including businesses, individuals and residents, funded by everyone
- 85% of respondents also thought a community renewable energy target should be considered

To understand the implications of community target setting, the Action Plan development process will undertake benchmarking of approaches by other Councils.

Benchmarking could explore topics such as what targets others have set (types and level of ambition), how others have managed expectations (accountability and level of control and influence) and how they have approached action development in relation to municipal level targets (broad focus or targeted focus on a sector or source).

The Action Plan process will need to consider the benchmarking review, engage with stakeholders regarding the adoption of target(s) and align Actions to relevant targets.

Community role in action planning

Separately, Council is considering the role of a community advisory body to provide input into the Action Plan's development and then provide an ongoing role to guide implementation and community partnerships. This could for example be in the form of a committee comprising representatives from the community. Such an advisory committee is not uncommon in local government, however, approaches may differ.

To better understand the suitability and implications of an advisory committee for Alpine Shire's Community Climate Action Plan, a short review exercise exploring other Councils' approaches will be undertaken prior to the action planning stage. Benchmarking will investigate considerations such as:

- Structure and participation (e.g. approach to selection of representatives)
- Governance (e.g. establishment and coordination)
- Roles and influence (e.g. level of decision-making)

The Action Planning phase should allow for at least four community touch-points with a community advisory group.

ACTION PLAN DEVELOPMENT

Development of Draft Action Plan (and Monitoring and Evaluation Framework)

The development of specific and detailed draft actions will use the insights gained from the Roadmap process to reflect community priorities as well as areas to evolve or improve existing work by Council. An approximate four month process is recommended with appropriate touch points with community (as outlined above). The Action Plan itself is recommended for four years only, noting that the direction established by the Roadmap and the targets considered in the early phase of engagement for the Action Plan will be over a longer timeframe.

The development of detailed actions would also be informed by internal engagement and discussions with Council staff.

Each action committed through the process will require sufficient detail to provide clarity for all stakeholders and support successful implementation/delivery. For each action the following elements are considered/included:

- Action reference/number
- Action name
- Action description
- Action type (Mitigation, Adaptation or both)
- Community segment (e.g. Households; Businesses and Industry; Agriculture)
- Timing
- Indicative budget
- Lead and supporting Council teams/departments
- External partners
- Performance indicator(s)
- Implementation considerations (for internal use only)

The Action Plan will need to consider ways to group actions (for example by stakeholders, sectors or community segments). This can simplify communication of actions to relevant stakeholders when developing and implementing the Action Plan.

The grouping of actions could allow a staggered approach to action development. Note this approach would have limitations (e.g. inability to develop a holistic set of actions that intersect with each other) and inefficiencies (e.g. duplication of consultation processes).

Detailed actions will include both mitigation and adaptation responses to climate change. The adaptation component of the Action Plan will therefore address the same objectives that a Climate Change Adaptation and Resilience Plan would seek to address.

A supporting Monitoring and Evaluation Framework will be developed alongside the Action Plan. Such a Framework will support the implementation of actions, and allow transparent communication of successes and failures to stakeholders. Internal consultation on the Monitoring and Evaluation Framework will explore existing monitoring and evaluation processes which Council staff/teams undertake, and where these may feed into the Action Plan monitoring and evaluation. The aim would be to avoid duplication where possible.

Next Steps

Stakeholder consultation of Draft Action Plan

In addition to the role of a community advisory body, the Action Planning should include at least one round of external stakeholder consultation on the Draft Action Plan. Some of the specific external stakeholders who should be engaged (either re-engaged after the Roadmap development or for the first time) include:

- Sustainable Upper Ovens
- Myrtleford Community Power
- Towards Renewable Energy Kiewa
- Upper Ovens Valley Landcare Group
- Upper Kiewa Landcare Group
- Myrtleford Landcare and Sustainability
- State Emergency Service (SES)
- Country Fire Authority (CFA)
- North East Catchment Management Authority
- Tourism North East
- Chambers of Commerce
- Resilient Alpine Youth Squad
- Traditional Owners
- Goulburn Murray Climate Alliance (GMCA)
- Alpine Resilience Committee
- U3A
- Alpine Resorts
- Farmers for Climate Action

A comprehensive Engagement Plan will be developed for the Action Planning, considering:

- Targeted conversations/workshops focused on refining actions and confirming participation in specific actions
- Internal support within Council, community and stakeholders
- Broader activities such as an online survey and drop-by activities (e.g. stalls) to understand general community support and/or concerns
- Specific Traditional Owner conversations

The Engagement Plan should consider specific stakeholder segments (e.g. Traditional Custodians; vulnerable community members) which may benefit more from a 'forum' format for engagement, bringing together a larger group of relevant representatives. This could allow for group discussion to understand collective priorities, ideas and concerns for particular opportunities.

Acknowledging questions already posed during the Roadmap process, topics/questions for stakeholder consultation during the Action Plan development could include:

- Ability of draft actions to respond to climate change and community priorities
- Support for proposed actions, and any suggested changes
- Participation in the implementation of actions
- Level of ambition of any new targets
- Opportunity for additional specific ideas

Refinement to develop Final Action Plan

Insights and feedback from the stakeholder consultation will inform updates to the Action Plan as part of the finalisation process. Updates to the Action Plan would likely require further internal consultation to ensure buy-in for delivery once the Action Plan is adopted.

RESOURCING CONSIDERATIONS FOR ACTION PLAN DEVELOPMENT AND IMPLEMENTATION

While indicative budgets will be defined for each action in the future Action Plan, resourcing for the development of the Action Plan itself will be required. To allow Council to plan and allocate resourcing, the following estimates are suggested resourcing requirements for the activities listed above, as well as implementation:

- Additional supporting inputs:
 - + Community emissions profile: \$25K
 - + Target benchmarking: \$5K
 - + Community role benchmarking: \$5K
- Action Plan development (Draft and Final Action Plan & Monitoring and Evaluation Framework and stakeholder consultation): \$70K (a detailed modelling exercise aggregating individual actions against targets would be additional to this figure)
- If a community emissions modelling approach (which develops a detailed pathway to net zero community emissions by a prescribed date) is desired, this would likely cost between \$30K - 100K depending on the specific approach and complexity of the model. The Bass Coast project adopted a detailed Z-NET emissions model to aggregate actions by different actors (e.g. household solar, or business energy efficiency) towards a zero net emissions goal for 2030 (the target set by the Bass Coast community)

- Implementation costs are very variable, depending on the ambition set for Council's role in implementing the Plan. An ambitious Community Climate Action Plan (such as Bass Coast's) sets aside \$200K - 300K annually for implementation of community focused components of the Plan. This budget allows for ongoing annual programs such as community festivals/workshops and community grants, as well as the delivery of several more discrete initiatives (i.e. one-off study; development of a toolkit). Note that actions which would be delivered through the Capital Works program should be considered separately as part of any budget bids process
- Staff resourcing for the implementation of the Community Climate Action Plan is also scalable based on ambition, but would generally require two full time staff at minimum (along with Council's corporate Climate Action Plan)



View of landscape near Mount Hotham.
Image from www.visitmountbeauty.com.au.

Acknowledgements

The development of this Roadmap was helped by the thoughts, knowledge and passion of many people. Alpine Shire Council would like to thank everyone involved for their time and insights.

Some of the stakeholders involved included:

- Alpine Shire Council staff
- Alpine Shire Councillors
- Sustainable Upper Ovens
- Towards Renewable Energy Kiewa
- Myrtleford Community Power
- Upper Ovens Valley Landcare Group
- Upper Kiewa Landcare Group
- Myrtleford Landcare and Sustainability
- State Emergency Service (SES)
- Country Fire Authority (CFA)
- North East Catchment Management Authority
- Tourism North East
- Resilient Alpine Youth Squad



Community Climate Action Plan Roadmap staff workshop. Image by Karly Mansfield.

We respectfully acknowledge that every project enabled or assisted by HIP V. HYPE in Australia exists on traditional Aboriginal lands which have been sustained for thousands of years.

We honour their ongoing connection to these lands, and seek to respectfully acknowledge the Traditional Custodians in our work.

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