AUSTRALIAN LOCAL GOVERNMENT
CLIMATE REVIEW
2024

BETTER FUTURES AUSTRALIA

Ironbark Sustainability

ICLEI Local Governments for Sustainability OCEANIA

ACKNOWLEDGEMENT OF COUNTRY

We acknowledge First Nations peoples as the Traditional Custodians of the unceded lands and seas on which we live, learn and work and recognise their continuing connection to culture. We value their ongoing connections to Country and we pay our respects to Elders past, present and emerging.

We acknowledge the diversity of First Nations cultures, languages and practices and their continuing custodianship and resilience in keeping these alive. We recognise the importance of listening to the voices of local First Nations people.

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SUPPORTING ORGANISATIONS

AUSTRALIA, CANA

Better Futures Australia (BFA) brings together public and private sector leaders to scale success stories and demonstrate Australia's readiness for an ambitious national response to climate change. By building cross-sectoral networks and showcasing collaborative climate action, BFA invites all Australians to join a growing community of climate champions advocating for a national response to reach zero emissions well before 2050.

Driven by Sector Working Groups, BFA connects climate leaders across industries and communities, providing support to scale impactful actions. As part of the global Alliances for Climate Action and an accelerator partner of the UN Race to Zero campaign, BFA is committed to driving systemic change aligned with the 1.5°C Paris Agreement goal.

ICLEI OCEANIA AND THE GLOBAL COVENANT OF MAYORS FOR CLIMATE AND ENERGY (GCOM)

ICLEI Oceania serves as the regional secretariat for ICLEI - Local Governments for Sustainability and the Global Covenant of Mayors for Climate and Energy. ICLEI is founded on the notion that local governments are at the centre of furthering a just and sustainable world. We encourage sustainability as an integral part of urban development and bring a strong urban component to national and global sustainability policy.

The ICLEI network enables us to build connections across the local, regional, national and global levels. We advocate robust national and global sustainability policies that reflect the interests of local and regional governments and their citizens to translate global policy into local action.

IRONBARK SUSTAINABILITY

For nearly two decades, Ironbark Sustainability (Ironbark) has worked with councils, state and Federal governments and communities around Australia to reduce greenhouse emissions, tackle climate change and implement sustainability projects and programs.

We bring together a wealth of technical, project management, strategy development, finance and facilitation experience in the areas of climate change, smart lighting and data management.

INTRODUCTION

Better Futures Australia is proud to release the Australian Local Government Climate Review 2024 edition.
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Ironbark were commissioned to develop this review, with input from the Better Futures Australia Local Government Working Group. Ironbark, in collaboration with ICLEI Oceania and Beyond Zero Emissions have previously published two Australian Local Government Climate Reviews, in 2018 and 2021, as well as precursor reports prepared by the organisations separately.

The reviews to date have supported all Australian council and community stakeholders to better understand local government climate change targets, actions, strategies and policies. They have provided a comprehensive assessment of actions councils are undertaking and the barriers and opportunities facing councils and their communities.

The reviews have been used by communities and councils to inform their actions, and by state and federal governments to inform policy development and resourcing.

The 2024 review provides a timely update to the sector regarding progress to date on targets, actions, barriers and opportunities, as well as emerging opportunities to coordinate and align approaches with the state and federal governments.

This review provides an assessment of progress to date and continues to build an evidence-based approach to climate action at the local government scale.

The local government sector hosts an army of smart, capable, collaborative, driven and compassionate people champing at the bit to improve outcomes for their communities.

Providing targeted support for program delivery at this scale will reap considerable financial and social rewards.

Coordination between federal, state and local governments will drive more effective and rapid change with better benefits for all. This review advocates for effective policy, resourcing and support for the multilevel governance approach recommended to deliver climate action. Actions are presented for each emissions sector (energy – including the built environment), transport, waste and agriculture and land use) as well as for each level of government. It supports councils, communities and others working to reduce emissions in Australia. This review includes:

- Council ambition, targets and progress on climate action.
- Actions and barriers facing councils and communities.
- A monitoring and evaluation baseline for communities and councils.
- Case studies of leading councils and communities.
- Scalable projects for policy support and investment.
- Evidence to inform strategy and actions
- Sectoral approaches at the local government scale.
- Advocacy channels for the local government sector.

LOCAL GOVERNMENT, COUNCIL OR CITY

The term 'city' is often used internationally to mean 'local government area' or 'municipality' or the body governing such areas. In Australia we often use the term 'council' to refer to one of the 537 bodies governing local government areas in Australia. A 'council' can mean a city, shire, district, rural city, rural town, town, Aboriginal shire, Aboriginal council, rural city or regional city. There is even one Borough (Queenscliffe in Victoria). For the purpose of this report, Australian 'councils,' 'local governments' or 'cities' can be used interchangeably.

MULTILEVEL GOVERNANCE

Australian councils and their communities are at the forefront of dealing with the impacts of climate change. Unfortunately, they are under-resourced, ill-equipped to respond and are often hamstrung by state, territory and federal legal and institutional frameworks.

Addressing the challenges of climate change at the necessary speed and scale requires a more inclusive, adaptive and innovative response across all levels of government.

The report, Many Hands Make Light work: Connecting governments to accelerate climate action, outlines a new approach to climate governance in Australia known as 'multilevel governance.' This framework can empower all levels of government to fulfil their ambitions on climate change and genuinely contribute to Australia's national climate policy.

Energy Consumers Australia have also called for a multilevel governance approach to managing the energy transitioning in the Stepping Up Report.

As momentum for collaborative action in Australia builds, international efforts are also ramping up. Australia signed up to the Coalition for High Ambition Multilevel Partnerships (CHAMP) alongside 71 other countries during the COP28 UN Climate Conference in Dubai UAE. They all pledged to enhance cooperation on climate action between national, state and local governments through plans such as their Nationally Determined Contributions (NDCs).

A rapid and effective reduction of energy emissions requires a coordinated approach involving federal, state, and local governments, as well as industry stakeholders and the broader community.

Multilevel governance solutions include setting ambitious emissions reduction targets, implementing supportive policies and regulations, investing in research and innovation, identifying local priorities for investment and providing financial incentives for emissions reduction activities. Collaboration between different levels of government is essential to overcome regulatory barriers, align policy objectives, and ensure a smooth transition to a low-carbon economy. By working together, governments can ensure that policies are inclusive and effective, leading to sustainable and resilient climate solutions.
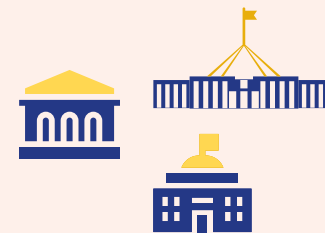
INTERNATIONAL CONTEXT

Central to the adoption of the Paris Agreement are several items of importance to Australian councils. The Paris Agreement explicitly recognises and engages local and sub-national governments, which is a significant success for councils and regions around the world. Australian councils can set localised emissions reduction targets that align with the ambitious target of the Paris Agreement to limit the increase in global average temperature to below 2°C and as close to 1.5°C as possible. Sustainable Development Goals are also driving global agreements between national and city governments on climate, sustainable development and resilience, while NDCs are increasingly recognising the contributions of local governments to national action.

The Intergovernmental Panel on Climate Change (IPCC) Synthesis Report for policy makers also defines multilevel governance as being when:

"

Effective local, municipal, national and subnational institutions build consensus for climate action among diverse interests, enable coordination and inform strategy setting but require adequate institutional capacity. Policy support is influenced by actors in civil society, including businesses, youth, women, labour, media, Indigenous Peoples, and local communities.

"

COUNCIL AND COMMUNITY ACTION FOR A SAFE CLIMATE

Councils and communities have long demonstrated leadership on climate action. Despite Australia's position as one of the largest exporters of fossil fuels and per-capita emitters of greenhouse gases, domestic policy is fast becoming more accountable with more ambitious targets and actions to drive effective emissions reduction and prepare communities for the impacts.

Local governments, often unsung heroes, have been quietly spearheading climate action for decades. From the late 1990s, local governments were implementing policies and strategies to respond to climate change.

In 2007, while many state and federal governments were trying to wrap their heads around how to tackle the climate challenge and reduce emissions,

240

Australian councils, representing

84%

of Australia's population, were already taking action. They were reporting on their emissions, setting emissions reduction targets and implementing energy efficiency, renewable energy and behaviour change projects across their operations and wider communities.

This legacy shines through decades later, councils are trusted, representative, and deeply embedded within communities, they hold a unique position to drive change.

Local governments are at the frontline of action and response. After years of bushfires, floods, droughts and storms, councils are first responders when the impacts of climate change are at their doorstep, serving their communities. Efforts to date, from piloting initiatives to caring for communities during disasters, have laid the groundwork for meaningful transformation.

But the journey forward demands enhanced collaboration. Federal, state, and local plans all need to lean into a unified vision, where every cog in the system plays a pivotal role. Australia is starting to develop a nationally consistent approach to decarbonise our economy, in line with the Paris agreement and a zero-emissions future is within our grasp.

Local governments stand uniquely poised to implement climate actions across most sectors, from clean energy adoption to sustainable transport infrastructure. Local governments are leaders, place makers and connectors in their communities. By aligning with sectoral plans and championing socially inclusive, economically responsible solutions, they can pave the way for a cleaner, safer Australia.

Global networks like ICLEI and climate organisations like Better Futures Australia have long been advocating for effective integration and leveraging the expertise of local councils and communities. While local councils serve the needs of their communities, they also operate in a global context that acknowledges that local actions have broad implications, both for our neighbours and for the planet as a whole.

The leadership of local governments is critical to the decades ahead, and while much has been achieved, there is much more to be done to reduce sector emissions and coordinate a community-wide response. The policy decisions made today will shape the climate impacts and economic opportunities for many decades to come. We all have a role to play to help us go further faster.

This review outlines opportunities to strengthen partnerships between local, state and federal governments to meet the community's aspirations for increased climate action and maps out climate solutions across all levels of government, showcasing the critical role local councils play in shaping a zero-emissions Australia. Climate change requires collective action, and everyone – governments, households, industry, and communities – have a part to play in forging a cleaner, more resilient future.

EXECUTIVE SUMMARY

The Australian Local Government Climate Review 2024 captures the perspectives of 120 council representatives covering 38% of Australia's population.

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The survey of local councils and communities, conducted in April–May 2024, also saw an additional 64 community respondents throughout all Australian states and territories.

The review is structured to align with the Australian Government's sectoral emissions reduction plans, which aim to outline how Australia will transition to a net zero economy by 2050 across six key sectors: electricity and energy, the built environment, transport, industry and waste, agriculture and land and resources.

Improved multilevel governance is needed to clarify and coordinate the roles of each level of government, and to streamline effective action across these sectors.

COMMUNITY

Community groups remain a driving force in advocating to the government to take ambitious climate action. Across Australia, community groups see a range of tangible benefits from climate action. As climate impacts and cost of living pressures intensify, community groups play a critical role in building relationships with local governments, other community organisations, and regional alliances, while also supporting vulnerable populations.

Community advocacy is vital in maintaining pressure on all levels of government for effective climate action.

CORPORATE

Council corporate or operational emissions make up approximately 1.5% of Australia's total emissions. Many councils are actively working to reduce these emissions and have established greenhouse gas emissions inventories, targets and action plans. However, funding, access to expertise, clear guidelines and opportunities to learn and collaborate with other councils have been identified as key areas of support needed to overcome barriers in reducing corporate emissions.

To drive further progress, local governments can:

- set corporate emissions reduction targets
- develop corporate emissions reduction action plans with defined targets, actions and timelines
- integrate Scope 3 reporting into corporate inventories.

To support council's corporate climate action, State and Federal governments can:

- Develop and resource state or regional programs to support council corporate mitigation efforts.
- Fund local councils to undertake activities such as energy or fleet upgrades.
- Provide nationally consistent, minimum climate disclosure reporting standards for local governments.

COMMUNITY-WIDE

Beyond their own operations, many councils have set community-wide emissions reduction targets and are working on strategies, plans, or policies to reduce emissions across their communities. Key drivers for action include active and engaged communities, council leadership, and assigned staff responsibilities.

Key barriers to reducing community-wide emissions are funding and internal resourcing. While councils alone cannot achieve community-wide emissions reduction targets, they can lead by example with ambitious targets and targeted programs. They can also use their trusted position to educate, facilitate and support local communities in taking meaningful climate action.

Although councils can make decisions about their own operations and assets and set community-wide targets and action plans, achieving a net zero target requires collective efforts from residents, businesses, industry, and the actions of the state and federal governments.

Accomplishing emissions reductions at the scale required will depend on contributions from various stakeholders and broader societal and structural changes beyond council's direct control.

Collaborating with industrial and commercial stakeholders to set more ambitious targets and identify local investment opportunities is a key strategy to reduce emissions across the community.

To drive further progress in the community, local governments can:

- Set a community-wide emissions reduction target.
- Develop community-wide action plans to support and facilitate local emissions reduction.
- Increase participatory decision making between local councils and communities.
- Advocate for federal government to adopt targets aligned with the latest science and sector carbon budgets.

To drive community-wide climate action, state and federal governments can:

- Develop and resource state or regional programs to support council's community-wide mitigation programs.
- Deliver on the commitment to recognise local government contributions to Nationally Determined Contributions (NDCs) as outlined in the Coalition for High Ambition Multilevel Partnerships (CHAMP) agreement.

89%

of councils have set or planned ambitious corporate emissions reduction targets.

68%

have set or planned community-wide emissions targets.

Councils' targets cover

29%

of Australia's current emissions targets by 2035.

CLIMATE IMPACTS, RISK AND ADAPTATION

Communities and councils are already experiencing the impacts of climate change on their local community or council operations. However, most do not feel adequately prepared to deal with these impacts.

While councils are starting to incorporate climate change into their financial, risk and asset management planning, a lack of knowledge and resources remains a significant barrier. This is especially critical, given that, when climate-related disasters strike, local governments bear the most significant and immediate burden of any level of government.

Recommended actions for local, state and federal government to drive progress.

Local governments

- Provide information on climate change actions, risks and adaptation to the community.
- Prepare for high emissions scenario impacts by 2050.
- Conduct physical and transitional risks assessments, both corporate and community-wide.
- Advocate for nationally consistent climate data, risk assessment and adaptation frameworks.
- Advocate for increased training and resourcing.
- Support vulnerable councils and communities in addressing climate impacts.

State and federal government

- Resource community groups to better manage climate impacts.
- Incorporate climate risk into each state's Local Government Acts and support councils in understanding and responding to these risks.
- Develop and fund national, state and/or regional programs to support councils' corporate and community risk and adaptation programs.

ADVOCACY

Most councils feel that the role of local government is critical in meeting national and global climate targets.

Most councils have engaged in advocacy to state or federal government on climate change issues, often via a state Local Government Association or third parties such as Greenhouse Alliances or Regional Organisation of Councils.

Recommended actions for local, state and federal government to drive progress.

Local governments

- Support local community groups with financial and/or practical support, and ensure vulnerable groups are represented.
- Join or form peak bodies, associations and alliances to drive ambitious action and provide policy recommendations.
- Develop relationships and regional points of contact for First Nations engagement.
- Advocate for state and federal government support to scale up and amplify effective emissions reduction programs for all councils.

State and federal government

- Support annual events to drive collaborative emissions reduction initiatives with councils, regions and states.
- Provide strategic alignment and resource state or regional programs to support corporate and community-wide climate actions.

If adequately resourced and supported, partnering with councils presents one of the most efficient ways for state and federal governments to implement successful climate programs and achieve positive outcomes.

This review highlights the crucial role of local councils in Australia's net zero plan. By fostering collaboration and setting ambitious targets, councils can spearhead effective climate action that supports national and global objectives. The findings and recommendations here call on all levels of government to back local efforts, ensuring a resilient and sustainable future for Australia.

METHODOLOGY

SURVEY DETAILS

The data in this review are based upon the results of a voluntary online survey for local councils and communities.

The survey was developed by Ironbark, based on the previous 2018 and 2021 publications. It was reviewed by the Better Futures Australia Local Government Working group, including representatives from ICLEI Oceania, Climate Emergency Australia, Climateworks, the Victorian Greenhouse Alliances and a number of local government associations, councils and community groups.

The survey was promoted through various newsletters, organisations and industry contacts and responses were collected between April and May 2024.

The survey gathered data on councils and communities, including:

- Demographic information about each council.
- Corporate greenhouse gas emissions (corporate inventories, targets, strategies, actions and monitoring and evaluation).
- Community greenhouse gas emissions (community emissions profiles, targets, strategies, actions and monitoring and evaluation).
- Climate impacts and adaptation (adaptation and resilience plans and strategies, climate impacts).
- Advocacy and collaboration (the role of local government, advocacy, working with community and other levels of government).

RESPONDENT CHARACTERISTICS

The online survey resulted in 189 responses. Of these, 120 were from council representatives across 110 different councils, and 64 were from community respondents. Responses have been weighted so as to not over-represent councils where multiple staff have responded and results are presented as a percentage of responses.

Sample sizes for individual questions vary as not all questions were compulsory, which should be considered in assessing these results. Respondents could often select more than one option so percentages don't necessarily sum to 100%. Percentages are the proportion of people who selected the option out of all who completed the question.

There is fair representation across all states, with Victoria best represented and lower proportions from South Australia, Queensland and the Northern Territory. There were community responses from the Australian Capital Territory but not from the Territory government.

Figure 1 Percentage of council responses from each state (%)

Council responses are roughly equally representative of regional centres, capital cities, rural and urban fringe growth areas' demographics. The responding councils represent 38% of the Australian population, although it should be noted that there are many councils who are not reflected in the survey results. These are predominantly the sparsely populated rural and remote councils, with very limited resourcing to respond to climate concerns.

Figure 2 Which of these best describes your location of your council? (%)

Regional centre 28
Capital city 25
Other 5
Rural 23
Growth area – urban fringe 19
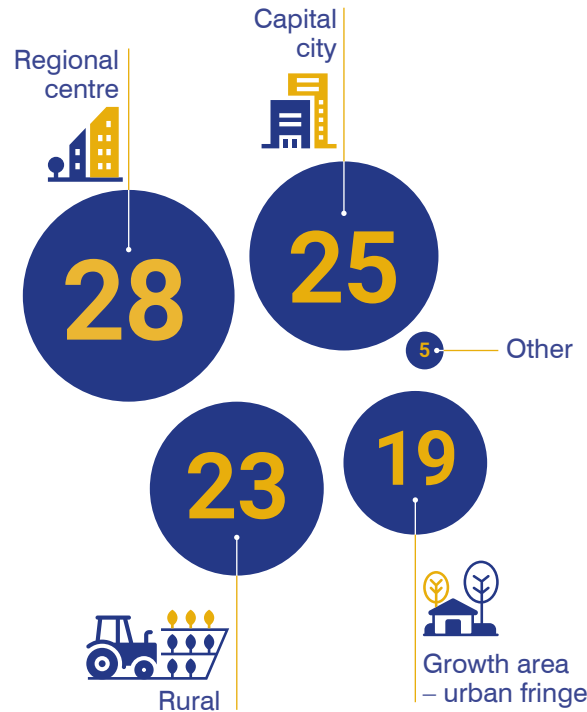
Approximately half (51%) of the respondents to the council section of the survey identified themselves as council officers, **28%** as team leaders or coordinators, **11%** as managers and **5%** as an elected member. Almost half of the respondents had been working with their council for more than five years, while most of the remaining respondents had been at council between 1–5 years.
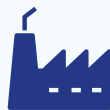
A longitudinal comparison of responses from the 2018 and 2021 reviews was outside of the scope of this work.

LOCAL GOVERNMENT ROLE IN NATIONAL SECTOR PLANS

INTRODUCTION

Australia is one of the top 20 emitters worldwide, with one of the highest global emissions intensity per capita. Domestic emissions contribute approximately 1.3% to global greenhouse gas emissions.

Australia's emissions create vulnerabilities to climate change impacts, including heatwaves, droughts, bushfires, and coral bleaching events. There is increasing pressure on all levels of government and the community to strengthen its emission reduction commitments and transition to a low-carbon economy.

This section outlines the various emissions sectors, the role of local government and multilevel governance solutions, and the benefits of taking action. It is designed to align with the Australian Government's new sectoral emissions reduction plans which aim to articulate how Australia will transition to a net zero economy by 2050.

> **Australia's emissions predominantly come from electricity and gas production and use, particularly from coal-fired power plants. Transport and agriculture emissions, predominantly from livestock digestion and manure management, also contribute significantly to Australia's overall emissions footprint.**

Figure 3 Australia's 21/22 emissions by source: Snapshot Climate. (%)

AUSTRALIA 2021/22 NATIONAL EMISSIONS SNAPSHOT

🌾 **Agriculture**	**13%**
🕯️ **Fugitive**	**10%**
♨️ **IPPU**	**6%**
🗑️ **Waste**	**3%**
🚆 **Transport**	**18%**
On road	16%
Rail	1%
Aviation	1%

Total municipal emissions

465 539 000

t CO_2e

Electricity	**37%** ⚡
Residential	10%
Commercial	10%
Industrial	17%
Gas	**13%** 🔥
Residential	2%
Commercial	1%
Industrial	10%
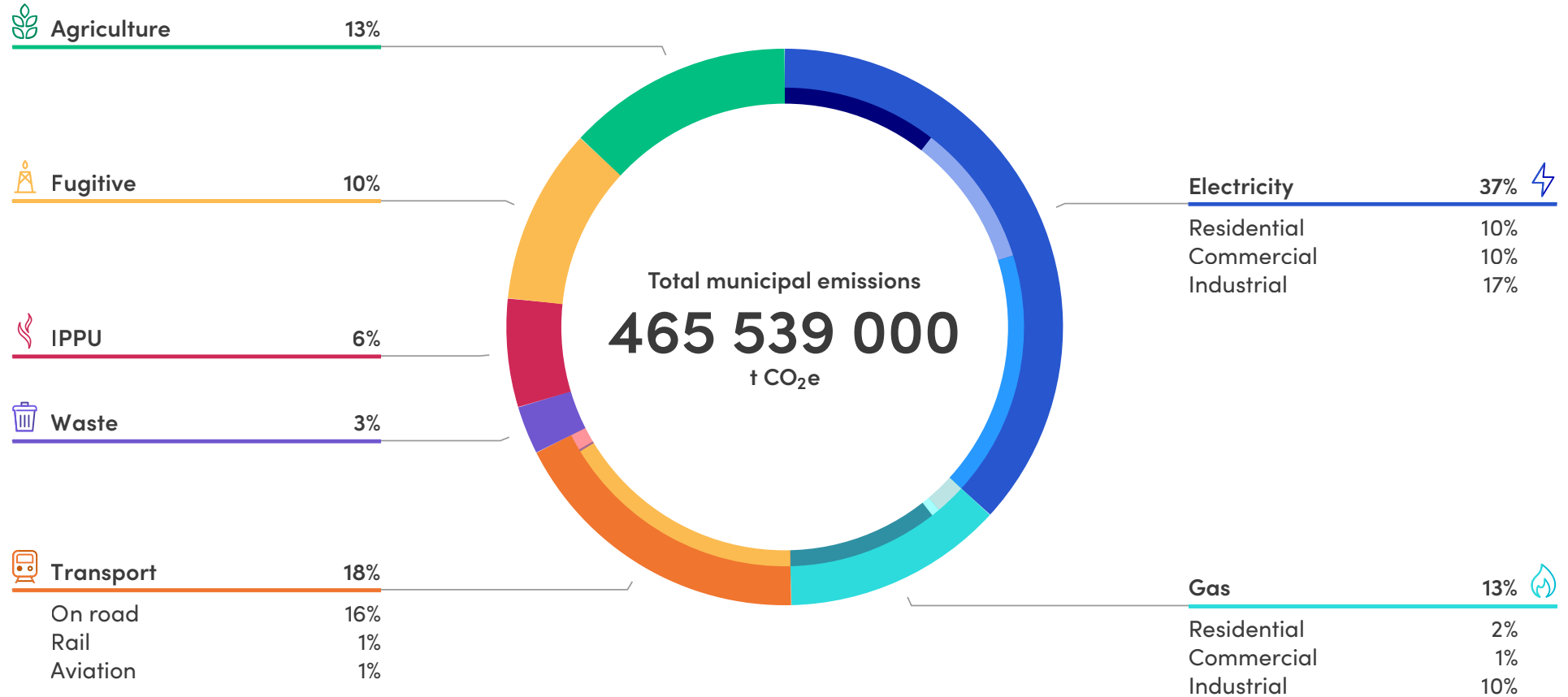
STATIONARY ENERGY

Stationary energy emissions originate from gas and electricity generation and consumption. They are major contributors to Australia's greenhouse gas emissions, collectively accounting for just under half of the country's national emissions profile.

Electricity emissions

169 081 000

t CO_2e
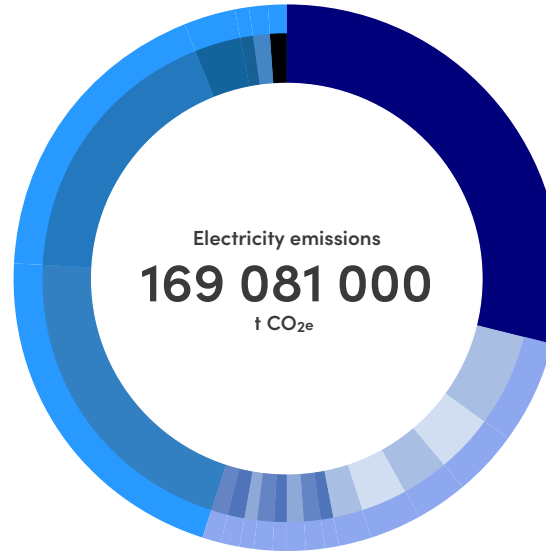
Electricity	Source %
Residential	29%
Commercial	26%
Retail Trade	6%
Public Administration	4%
Education & Training	3%
Healthcare	3%
Other Services	2%
Wholesale Trade	1%
Arts and Recreation	1%
Professional	1%
Accommodation & Food	1%
Financial & Support	1%
Real Estate	1%
Information Media	1%
Industrial	45%
Manufacturing	21%
Mining	18%
Transport	3%
Utilities	1%
Construction	1%
Agriculture	1%

Figure 4 Australia's 21/22 electricity emissions adapted from Snapshot Climate. (%)

Progress to date

Australia is uniquely placed to decarbonise our energy sector, with the best wind and solar resources in the world and more than enough large scale renewable resources to power our homes, transport and industrial sectors. Australia has made significant progress towards reducing emissions from the energy sector, with rapid uptakes of renewable energy.

40%

of the National Energy Market is now supplied from renewables and

3.5m

homes have solar power.

Reflecting our international commitments, at the UAE last year during COP28, Australia pledged to transition away from fossil fuels in a just, orderly, and equitable manner. Specific targets include tripling renewable energy capacity and doubling energy efficiency by 2030, underscoring its commitment to enhancing sustainable energy practices across the nation. However, there is still a long way to go before Australia achieves a fully renewable grid.

Role of local government

Local governments play a significant role in reducing stationary energy emissions through urban planning, building regulations, and energy efficiency initiatives for residential and commercial users. Councils can reduce their own corporate emissions through installation of solar and energy efficiency measures on council facilities. They can empower residents to electrify everything and support small and large commercial entities to engage in cost effective energy efficiency upgrades and solar installations.

Initiatives at the local government level include:

- administering state and federal low emissions and climate resilient planning controls and standards
- establishing ambitious planning controls to pioneer improvements and demonstrate what can be achieved (as has been the case in Victoria with the establishment of Sustainable Design Assessment in the Planning Process (SDAPP) Framework)
- demonstrating leadership by improving the energy efficiency and climate resilience of public council buildings
- providing education for residential and commercial electrification, and
- incentives to community energy efficiency and renewable energy projects.

With more solar on homes, business and industry, local governments can support their community to take power into their own hands and provide cheaper, safer and more comfortable spaces. Councils can support and enforce various regulatory measures, such as mandating new homes be all electric.

Local governments can support the various state-based renewable energy targets, support investment in renewable energy infrastructure and contribute to the growth of renewable energy generation capacity. Local governments can support a more resilient and more affordable energy system through the installation of batteries, the expansion of the renewables grid, providing trusted communication with the community and prioritising assistance for vulnerable households.

Multilevel governance solutions

The transition to a low-carbon energy system is complicated by factors such as policy uncertainty, regulatory barriers, grid capacity and the ageing of coal-fired power plants.

A rapid and effective reduction of stationary energy emissions requires a coordinated approach involving federal, state, and local governments, as well as industry stakeholders and the broader community.

Key strategies include phasing out coal-fired power generation, increasing the deployment of renewable energy sources, improving energy efficiency in buildings and industrial processes, and promoting demand-side management and energy conservation measures.

Collaboration between different levels of government is essential to overcome regulatory barriers, align policy objectives, and ensure a smooth transition to a low-carbon energy system. By working together, governments can ensure that policies are inclusive and effective, leading to sustainable and resilient clean energy and climate solutions.

Benefits

Reducing stationary energy emissions offers a wide range of benefits, encompassing environmental, social, economic, and health aspects. Benefits include mitigating climate change impacts, improving air quality, reducing exposure to pollutants, enhancing energy security nationally, saving businesses and residents on their power bills, and creating local jobs and innovation.

The new federal Future Made in Australia Act plays a pivotal role in supporting the foundation of new clean industries. It provides significant investment and support for the development of renewable energy projects, advanced manufacturing, and green technologies, ensuring Australia's transition to a low-carbon economy is both just and economically beneficial. By fostering the growth of these industries, the Future Made in Australia Act aims to boost local economies, drive innovation, and position Australia as a global leader in clean energy solutions.

TRANSPORT

Transport is a large and growing component of Australia's emissions. Significant change will be required to enable and encourage the behaviour and infrastructure changes needed to minimise emissions in this area.

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The transport sector emits about a fifth of Australia's annual greenhouse gas emissions and is on track to become the largest emitting sector, as electricity emissions decline.

Road transport accounts for the majority of transport emissions, with

65%

of transport emissions coming from personal or commercial and

23%

from freight, and

8%

from aviation.

Progress to date

Australia has made some progress in reducing emissions from the transport sector through initiatives such as the fuel efficiency standards and encouraging the adoption of electric vehicles (EVs). EV sales are rapidly increasing but still a small fraction (8.5%) of new vehicle sales. Since 2005, transport sector greenhouse gas emissions have increased by 11%. Challenges remain in achieving substantial reductions. These include the continued growth in vehicle numbers, reliance on fossil fuels and infrastructure limitations for alternative modes of transportation.

Role of local government

Councils are uniquely placed to tackle both the infrastructure and behaviour change elements required to abate transport emissions. Local governments play a crucial role as they are responsible for urban planning and infrastructure development.

Initiatives at the local level include the expansion of public transport networks, implementation of cycling and walking infrastructure, and promotion of carpooling and ridesharing services. Local governments can also influence land-use planning to reduce the need for long-distance commuting and encourage mixed-use developments that promote walking and cycling.

Transport emissions
84 848 000
t CO$_2$e
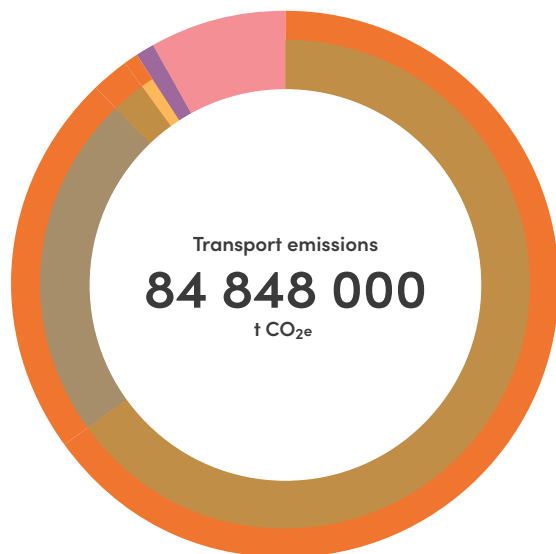
Transport	Source %
On road	91%
Automotive	65%
Freight	23%
Bus	2%
Motorcycle	1%
Rail	1%
Train	1%
Tram	0%
Aviation	8%

Figure 5 Australia's 21/22 transport emissions adapted from Snapshot Climate – Google EIE.(%)

Many local governments are taking the lead on planning for EV charging infrastructure, particularly for residential neighbourhoods, while state or federal governments focus on major transport routes. There are a wide range of emerging approaches and business models to ensure that communities can access chargers, including in locations where there is a lack of off street private parking, that local governments are well suited to lead.

Multilevel governance solutions

Effective transport policy requires a mix of solutions to enable fast, effective and affordable transport. Collaboration between federal, state, and local governments is essential to ensure a cohesive approach to reducing transport emissions. Net Zero Plans should specify how all levels of government will collaborate on the planning, design and delivery of transport and infrastructure design and investment to overcome current barriers, as well as collaboration with industry stakeholders and the community. The plans need to demonstrate how to overcome capacity and capability constraints, which have been acting as a barrier to implementing active transport solutions.

Key strategies include the electrification of vehicles, expanding public transportation options, improving fuel efficiency standards, and promoting active transportation modes such as walking and cycling. Many local governments already have transport emissions reduction plans, and state and federal governments can target programs to support collaborative efforts and drive sustainable transport solutions nationwide.

The recent federal announcement of a $100 million active transport fund, channelled through state governments, acknowledges the importance of local government involvement, but budgetary inertia for transport infrastructure across all government levels is a key barrier. Collective advocacy for effective approaches is crucial, alongside opportunities for regional or sector-based proposals.

Benefits

Changes to transport infrastructure will bring great benefits, supporting healthier and better connected communities and networks. Transport infrastructure shapes our cities and regions and determines how we can engage with the communities around us and our social interactions. Increasing active and public transport will ease congestion, reduce pollution, heat and noise, decrease costs and provide health benefits and lower healthcare costs from increased activity levels and safer streets.

Policies to shift

30%

of our current transport to active or public transport modes will be challenging, but changes like the national vehicle and fuel efficiency standards and the QLD government introducing

50c

fares for all Public Transport, show they are possible.

Interventions which reduce the need for travel are the most effective means to reduce transport emissions. Where travel cannot be avoided, efficient transport options are pivotal for cost and emissions reduction.

Collaboration between local and state governments is vital for land use planning, remote work, and demand management to promote travel alternatives. Active, shared, and public transport must be prioritised to mitigate increased electricity demand from EVs. To address transport challenges, diverse solutions are necessary, including setting ambitious targets for EV transport in both passenger and commercial sectors.

Targets that measure the outcomes of policy interventions are needed. Solutions should vary by time frame and infrastructure type, with recognition of differing regional capabilities.
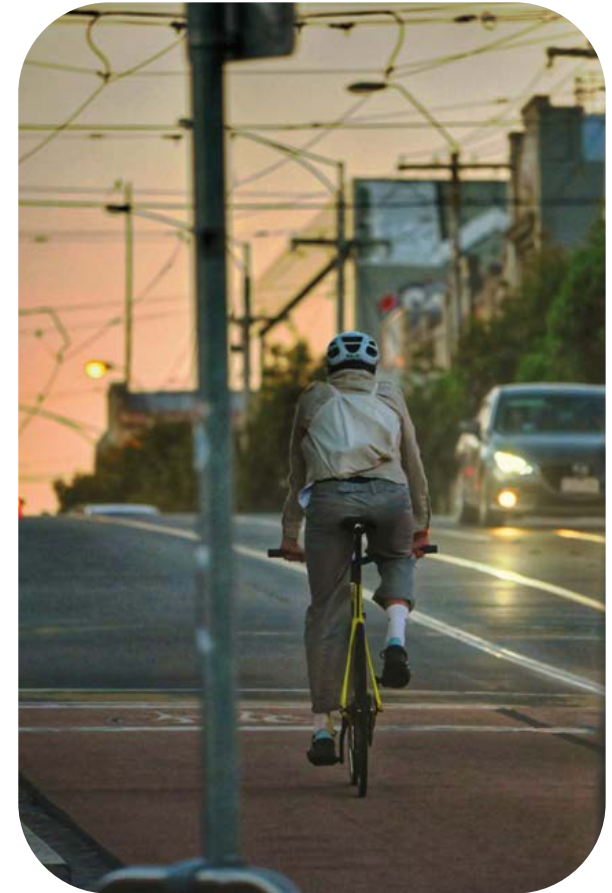
WASTE

Australia's waste emissions constitute approximately 3% of the nation's total emissions profile. These emissions primarily result from the decomposition of organic waste, creating methane in landfills.

Waste emissions

12 810 000

t CO_2e
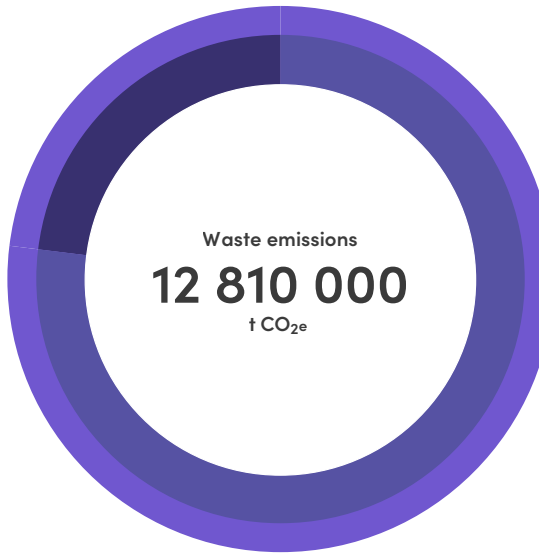
Waste	Source %
Landfill	77%
Water	23%

Figure 6 Australia's 21/22 waste emissions adapted from Snapshot Climate.(%)

Progress to date

In recent years, Australia has made significant strides in reducing emissions from the waste sector. Increased investment in recycling infrastructure and technological innovations has enhanced waste management efficiency, leading to greater diversion of organic waste from landfills.

Additionally, the implementation of state and federal policies aimed at promoting waste reduction, such as extended producer responsibility schemes and landfill levies, has incentivised businesses and consumers to adopt more sustainable practices.

Role of local government

Local governments have been at the forefront of these efforts, spearheading community-led initiatives and education campaigns to raise awareness about the importance of waste reduction and recycling. Many municipalities have seen substantial increases in recycling rates and reductions in per capita waste generation.

Local governments wield significant influence in reducing waste emissions. They have direct control over landfill management and can implement local policies and initiatives to promote waste reduction, diversion of food and organic waste from landfill, reuse and recycling within their jurisdictions.

Through strategic investments in recycling infrastructure, such as sorting facilities and composting plants, local authorities can facilitate the transition towards a circular economy and play a crucial role in community outreach and education, raising awareness about sustainable waste management practices among residents and businesses alike.

Multilevel governance solutions

Addressing waste emissions demands a coordinated, multilevel governance approach. State and federal governments possess the resources and regulatory authority necessary to support local initiatives effectively. They can allocate funding for waste management infrastructure, develop comprehensive policies, and enact legislation to enforce waste reduction targets.

Benefits

Reducing waste emissions also reduces costs associated with waste disposal and management for local governments as well as conserving resources, reducing local pollution and reducing the extraction of new resources. Waste management solutions, in line with circular economy policies, will also provide savings and innovation opportunities for local governments and their businesses and households.
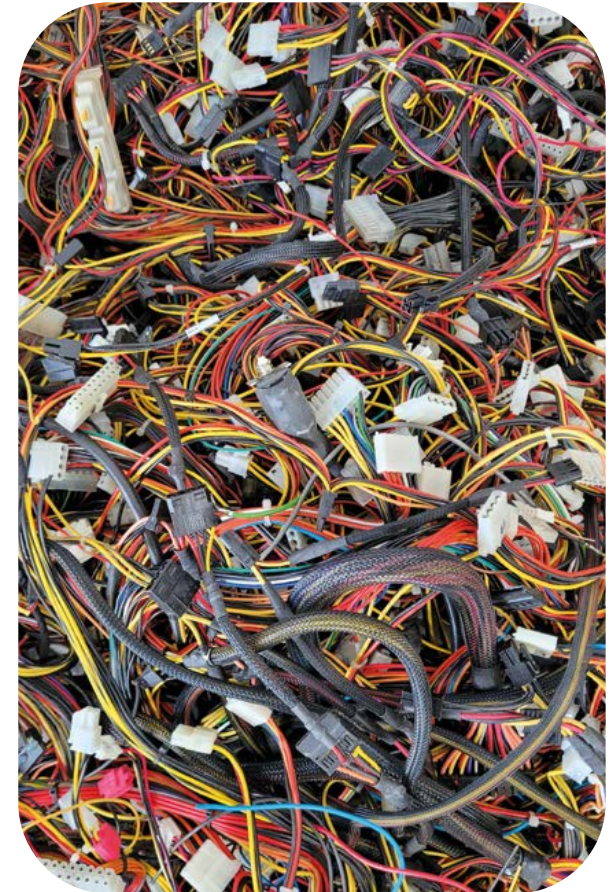
AGRICULTURE AND LAND USE

Agriculture is a cornerstone of Australia's economy, but it also contributes significantly to our emissions, making up approximately 13% of Australia's total greenhouse gas emissions, noting that emissions from agricultural practices are also included within transport, electricity and other sectors.
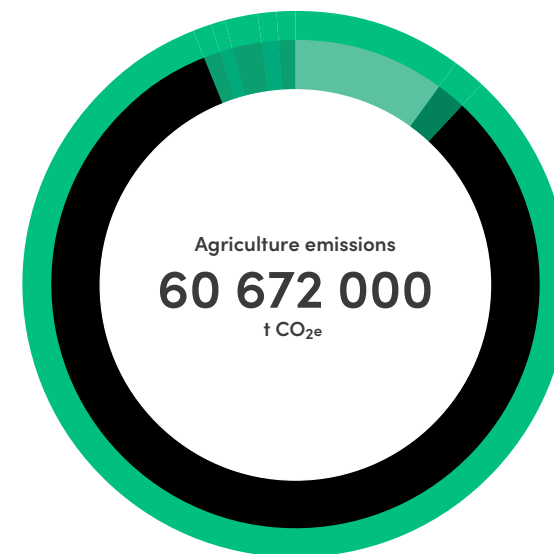
The proportion of emissions from agriculture will grow as emissions from stationary energy, and in time transport, abate. The primary source of agricultural emissions is livestock production, particularly beef and sheep farming. This is followed by crop cultivation and soil management practices, land-use changes and energy consumption.

Australia must ensure sufficient agricultural production to support its growing population and export market, while prioritising the wellbeing of regional communities.

To meet emissions targets, we need to reduce land-use emissions and significantly increase CO_2 removal through enhanced vegetation and healthier soils. From a local government perspective, managing land for a single purpose can have significant impacts on other aspects of the system. Decision-makers must carefully balance how land is used to support community needs and food production, while also addressing climate goals and broader sustainability objectives.

Agriculture emissions
60 672 000
t CO_2e

Agriculture	Source %
Sheep/Beef	82%
Dairy Cattle	10%
Pigs	2%
Other Crops	2%
Live Poultry	1%
Cotton	1%
Sugar Cane	1%
Vegetables	1%

Figure 7 Australia's 21/22 agriculture emissions adapted from Snapshot Climate. (%)

Progress to date

Australia has made some steps towards reducing agricultural emissions through initiatives such as improved livestock management practices, precision agriculture techniques, and the adoption of carbon farming, reforestation, revegetation, and soil carbon sequestration, which can help offset agricultural emissions.

However, the agriculture sector faces challenges in reducing emissions, including the need to balance environmental sustainability with food security and economic viability.

Role of local government

Local governments can address agricultural and land use emissions by implementing land-use planning policies and urban forests, supporting sustainable farming practices, and facilitating community engagement and education.

Some initiatives at the local level include promoting agroforestry and conservation agriculture practices, providing incentives for carbon farming projects, and supporting farmers in adopting climate-smart agricultural technologies. Local governments can also facilitate knowledge exchange and collaboration between farmers, researchers, and other stakeholders to promote sustainable land management and reduce emissions.

Multilevel governance solutions

Achieving emissions reductions in the agricultural sector requires a multilevel governance approach involving collaboration between federal, state, and local governments, as well as industry stakeholders and the community. Multilevel governance solutions include setting emissions reduction targets, implementing supportive policies and regulations, investing in research and innovation, and providing financial incentives for emissions reduction activities.

Benefits

Benefits of reducing agricultural emissions include mitigating climate change impacts, improving soil health and fertility, enhancing biodiversity and ecosystem resilience, and promoting sustainable land management practices. Reducing agricultural emissions can contribute to the diversification of rural economies, increase farm productivity and profitability, and strengthen Australia's position as a leader in sustainable agriculture and food production.

INDUSTRY AND RESOURCES

Fugitive emissions and those from industrial processes and product use make up 17% of Australia's greenhouse gas emissions.

....

Fugitive emissions stem from the mining industry including the extraction, production, processing, transmission, storage, and distribution of fossil fuels; primarily coal, oil, and natural gas.

Industrial processes emissions result from chemical reactions in manufacturing, including cement production, iron and steel manufacturing, and chemical processing.

Product use emissions arise from the consumption and disposal of goods, such as refrigerants, solvents, and aerosols, which release potent greenhouse gases during use and disposal.

Progress to date

Efforts to reduce fugitive emissions are predominantly tied to reducing fossil fuel consumption, as well as improving detection and monitoring technologies, methane capture and mitigation measures, and adopting best practices in resource extraction and processing industries.

Industrial processes emissions can be mitigated mostly through technology changes, including energy efficiency improvements, fuel switching, process optimisation, and the adoption of cleaner production technologies and materials.

Product use emissions reduction strategies focus on phasing out substances with high global warming potential, promoting product stewardship and recycling, and implementing regulations and standards for emissions reduction.

Role of local government

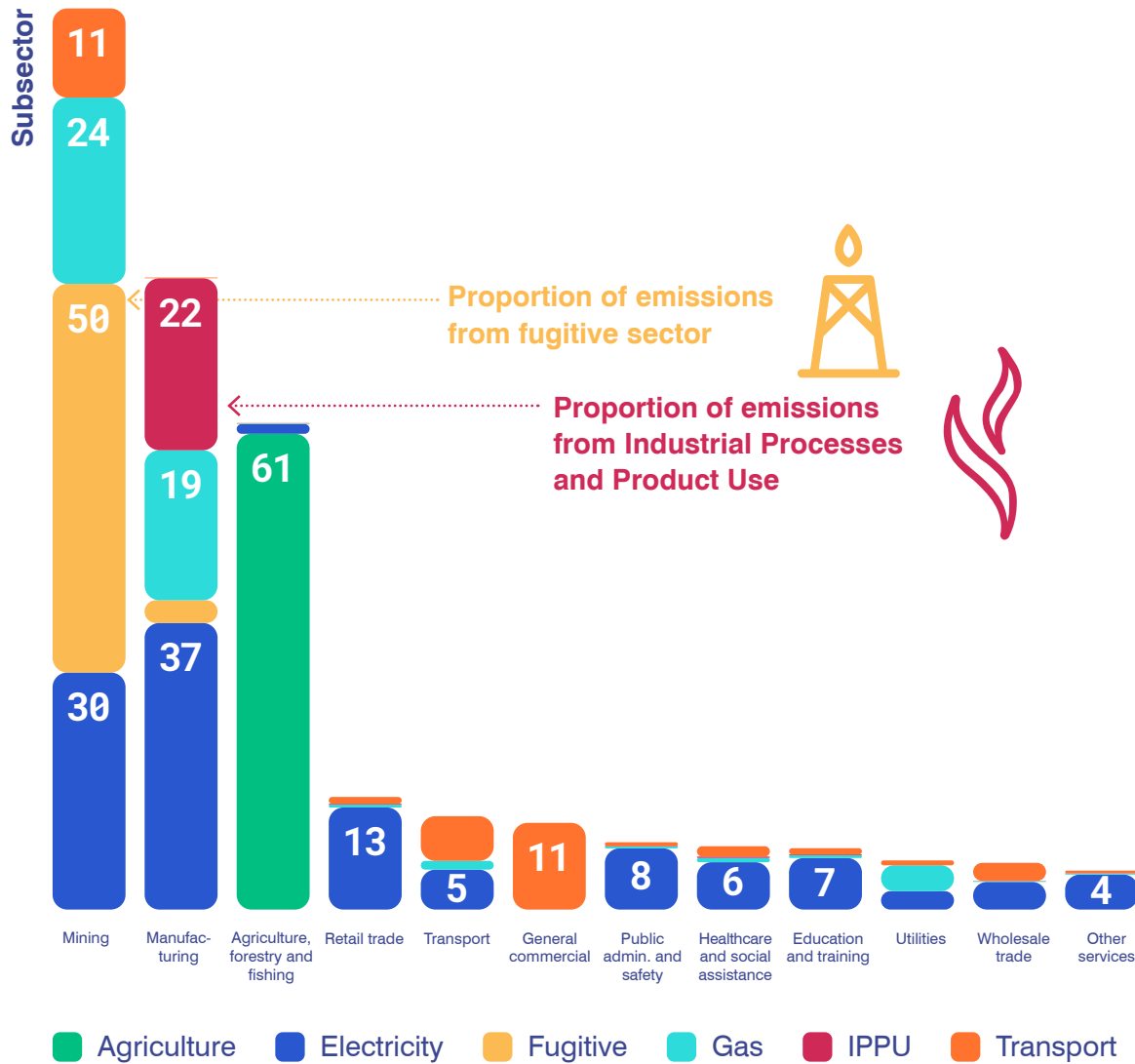Local governments can play a strategic role in addressing fugitive and industrial processes emissions by regulating land-use planning, development approvals, and environmental management practices.

Initiatives at the local level include zoning regulations to control industrial activities, issuing permits for resource extraction and processing operations, and implementing pollution prevention and control measures.

Figure 8 Australia's 21/22 emissions by subsector from Snapshot Climate – Snapshot Pro. Emissions (t CO$_2$e) millions.

Subsector

11				
24				
50	22			
	19	61		
	37			
30				

Proportion of emissions from fugitive sector

Proportion of emissions from Industrial Processes and Product Use

| 13 | | 11 | 8 | 6 | 7 | | | 4 |
| 5 | | | | | | | | |

Mining | Manufac-turing | Agriculture, forestry and fishing | Retail trade | Transport | General commercial | Public admin. and safety | Healthcare and social assistance | Education and training | Utilities | Wholesale trade | Other services

🟢 Agriculture 🔵 Electricity 🟡 Fugitive 🟦 Gas 🔴 IPPU 🟠 Transport

Local governments also engage with industries, communities, and other stakeholders to raise awareness, provide technical assistance, and facilitate compliance with emissions reduction requirements, such as new ASRS reporting standards.

Local governments can also highlight and champion the opportunities and challenges of their local businesses and industries to reduce these emissions and support effective policy development that can be implemented and supported using local knowledge.

Multilevel governance solutions

Collaboration between federal, state, and local governments, as well as industry stakeholders and the community are required to address fugitive and industrial processes emissions.

Industrial emissions collectively (incorporating industrial stationary energy and transport) make up

61%

of Australia's total emissions. This means efforts to hold industrial stakeholders to account and collaborate on effective policy, technology and advocacy solutions are essential to mitigate climate change effectively. Preventing further fossil fuel developments is the first step to avoiding fugitive and industrial emissions.

Benefits

Reducing emissions from Industry and resources will position Australia as a global leader tackling hard to abate industry solutions. Effective regulatory changes would also support improving air quality and public health, enhancing energy efficiency and resource conservation, and fostering innovation and economic growth.

The large proportion of emissions from these hard to abate sectors highlights the importance of establishing effective approaches and transparent allocation of responsibility to the companies directly involved. Our emissions reduction efforts in these sectors can also contribute to Australia's international commitments under the Paris Agreement, enhance environmental sustainability, and strengthen the country's resilience to climate-related risks and vulnerabilities.

COMMUNITY GROUPS

Community groups and organisations play an active role in tackling climate change and are often the drivers behind council actions and ambitions. The [movement monitor database](#) lists over 750 climate change groups nationwide, with a range of interests and objectives, and 500 of these focus on their local area.

Community groups and organisations have advocated for councils to declare climate emergencies, take effective action, support vulnerable communities and increasingly coordinate responses to climate impacts. Community groups regularly contribute to council public consultations and are active in shaping the action plans developed by councils. They have often been the driving force behind councils' climate leadership over the past 20 years.

Community groups and organisations can also run campaigns and undertake actions that councils can't. For example, the Australian Conservation Foundation is running a [campaign to end fossil fuel subsidies](#) while [350.org has a divestment campaign](#). They have more autonomy than a council, with freedom to take action without complex democratic governance and legislative requirements.

As groups of like-minded individuals, community groups also have a culture of taking broad-based climate advocacy action that councils, which represent more diverse interests, may not.

Community groups often include passionate and motivated individuals who can achieve considerable impact. Organisations like [CORENA](#) enable renewable energy projects with zero interest loans and technical assistance to non profit, social enterprise or community organisations. Projects are repaid using their energy cost savings. Organisations like the [Climate and Health Alliance](#) provide effective policy recommendations across all levels of government.

THE CLIMATE AND HEALTH ALLIANCE (CAHA)

CAHA serves Australia, New Zealand and the Pacific, working collaboratively with its alliance of health professionals from over 70 disciplines since 2010. CAHA delivers evidence-based education, research translation and policy recommendations to all levels of government.

CAHA's Health, Regenerative and Just Framework is reflected in national, state/territory and local public health and wellbeing planning. CAHA's Healthy Transport Campaign brought health evidence to vehicle emissions standards and urban planning policy and our 'co-benefits' work has underpinned investment. Through the Global Green and Healthy Hospitals (GGHH) network, CAHA supports sustainable healthcare, decarbonisation and resilience in over 2,600 health services.

Local community groups can also mobilise segments of the community that councils find difficult to reach. Councils can play an important role in supporting these groups to take action, for example by promoting them, facilitating discussions, connecting groups or providing funding.

Members of community groups often have extensive skills and can share resources and collective effort to accelerate community emissions reductions. Community groups can also help to amplify local voices and advocate to all levels of government for policy changes that will support community emissions reductions.
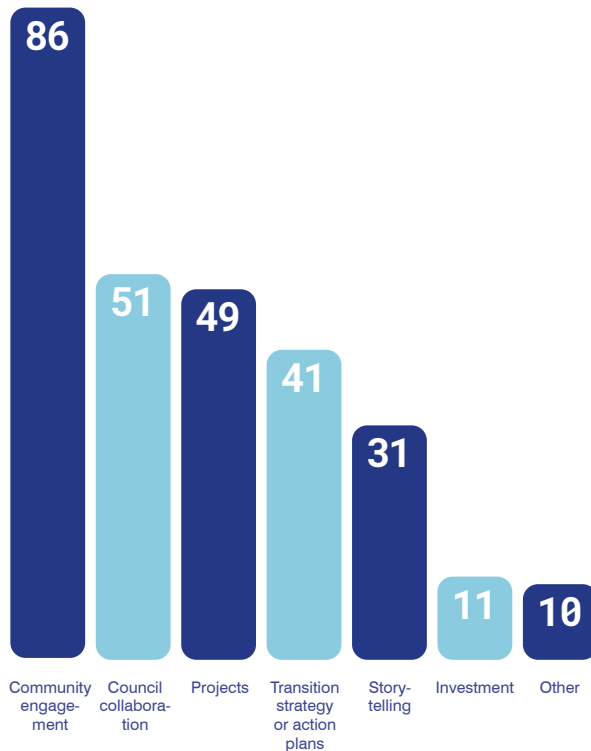
Community groups are also increasingly taking on roles to prepare for increasing impacts and support recovery efforts when disasters strike. The Community Disaster Action Group, Resilient Lismore and Resilient Uki were established in the wake of flooding impacts, and aim to support community connection and personal, mental and social wellbeing during and after crisis events. Local, state and federal programs to support grassroots collaboration is key to empowering communities to better cope with these events.

SURVEY RESULTS

The community survey was open to any individual or community group representative. 64 people provided a response, with 78% belonging to a community group working on climate solutions, and/or involved in local projects to reduce emissions.

These communities are working on a range of actions (Figure 9) and some (36%) have their own community climate action plan.

Figure 9 Which actions are you or your community involved in? (%)

86 — Community engagement
51 — Council collaboration
49 — Projects
41 — Transition strategy or action plans
31 — Story-telling
11 — Investment
10 — Other

70% contribute to local council submissions, committees or action plans. 41% have engaged with businesses or industries in their community on climate or zero emissions solutions, while 30% have engaged with Traditional Owners.

The vast majority (82%) of community respondents also felt that climate change has impacted their local community.

"
The impacts very much depend on socio-economic status — for example, clearly heat waves impact those in public housing towers or sleeping rough significantly more than those in dwellings with air conditioning.
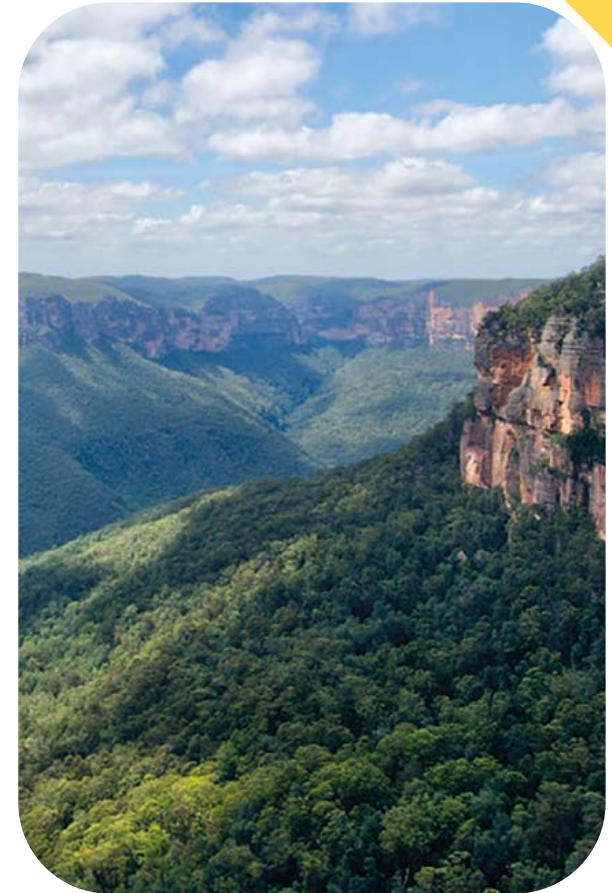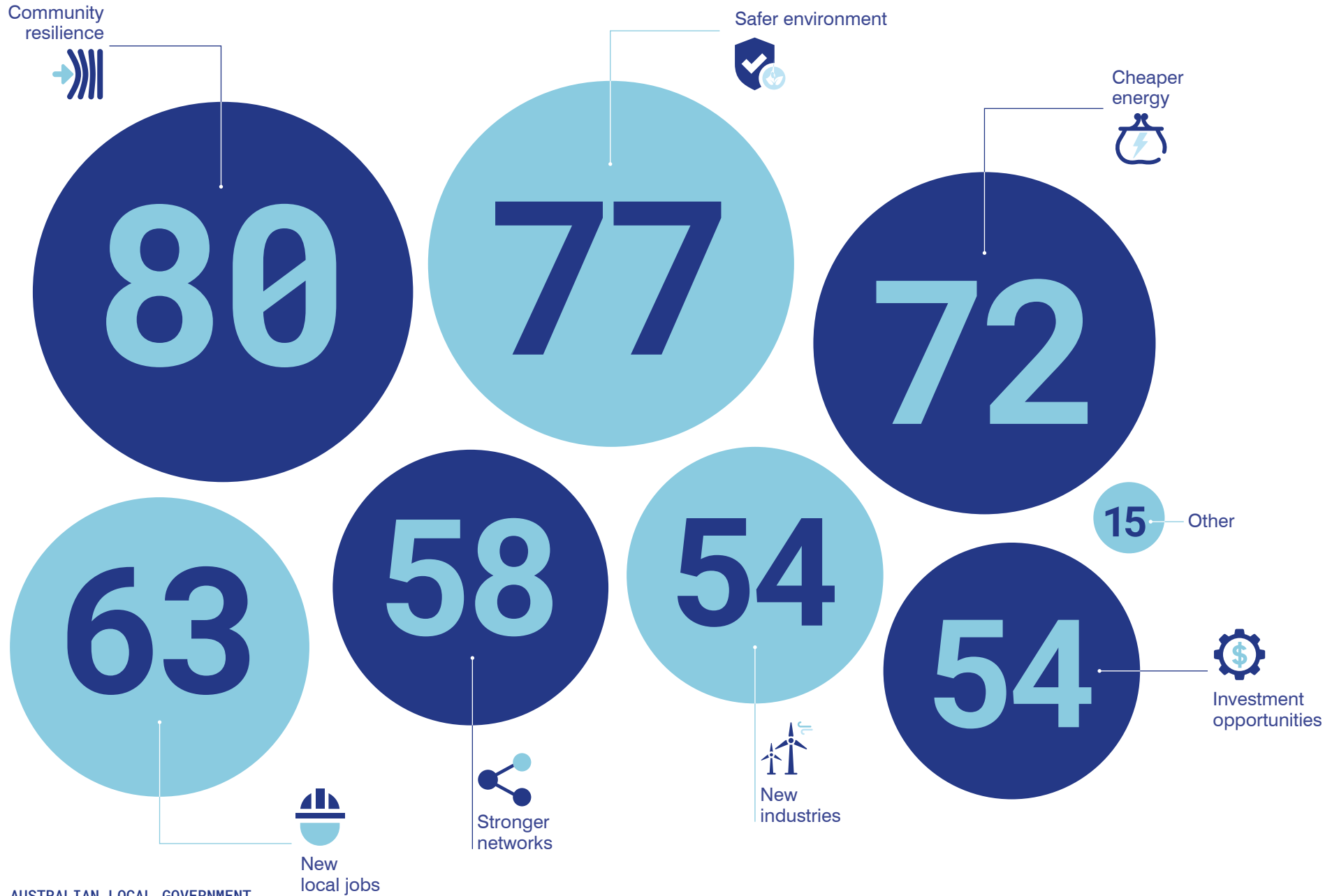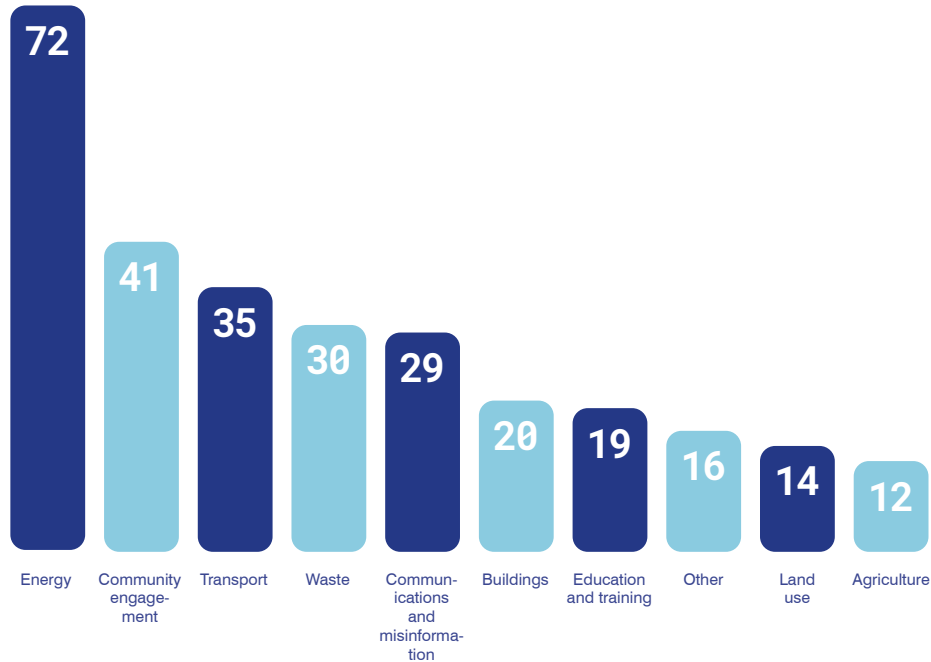"

Survey respondent

Figure 10 How do you think your community can benefit from a transition towards zero emissions. Please select all that apply. (%)

Community resilience

Safer environment

Cheaper energy

80

77

72

63

58

54

15 — Other

54

New local jobs

Stronger networks

New industries

Investment opportunities

Community groups were most interested in energy (72%) followed by community engagement (41%) and transport (35%). Providing effective communication, and combating disinformation, also remains a focus for community action.

Figure 11 Which sectors are most of interest to you or your community? Please select your top three. (%)

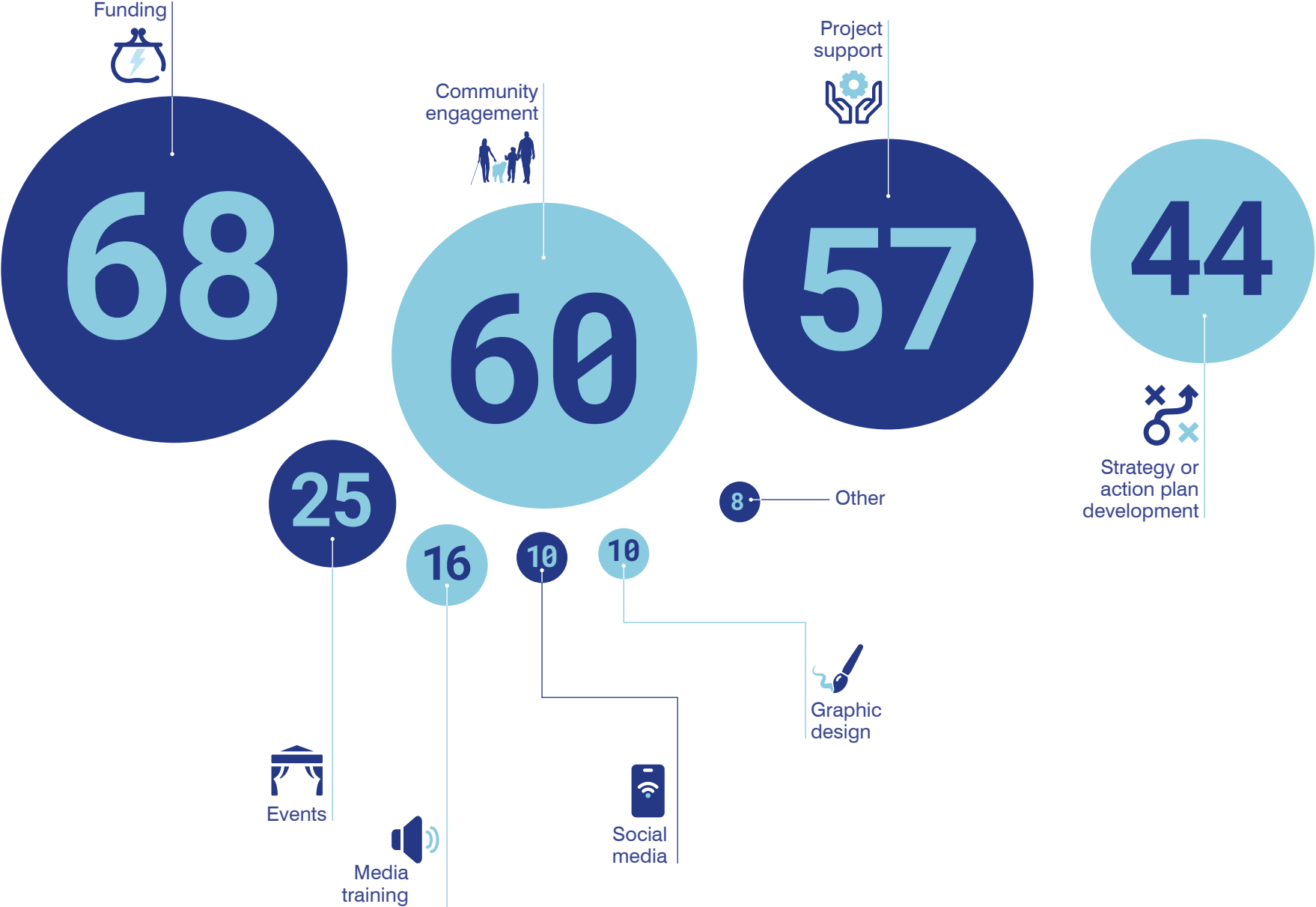| Energy	Community engage-ment	Transport	Waste	Commun-ications and misinforma-tion	Buildings	Education and training	Other	Land use	Agriculture
72	41	35	30	29	20	19	16	14	12

Beneficial support to resource climate actions include funding, project support, community engagement, strategy or action plan development (Figure 12). 78% of respondents thought that an agency to support local renewable projects would be helpful to their council or community, and 66% would consider investing in a commercial renewable energy project in their community.

"

We have a volunteer-run community renewable energy project with a lot of heart but we're limited by available volunteer power. A funded agency supporting the same objectives would help us take it to a new level!

"

Survey respondent

Figure 12 What kind of support would be beneficial to your group? (%)

Funding
68

Community engagement
60

Project support
57

Strategy or action plan development
44

Events
25

Media training
16

Social media
10

Graphic design
10

Other
8

Cost of living has become a primary concern for communities (this was not a category of concern in previous surveys), as well as extreme weather and climate events, environment, health and local employment.

Figure 13 What do you think are the key concerns for your community? (%)

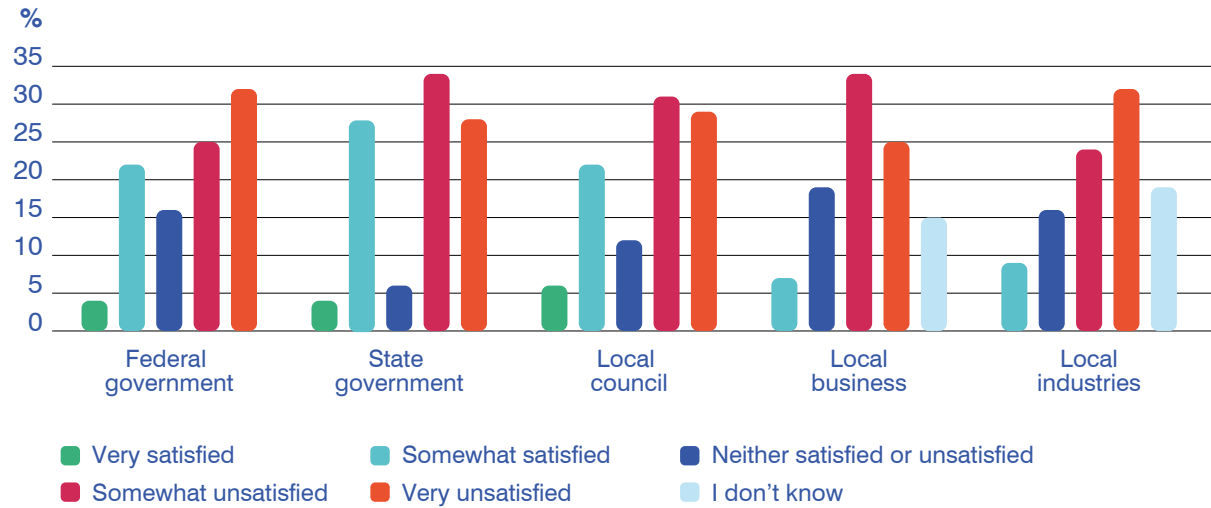|	
Cost of living	75
Extreme weather/climate events	67
Environment	61
Health	43
Local employment	42
Other	17
Education	16
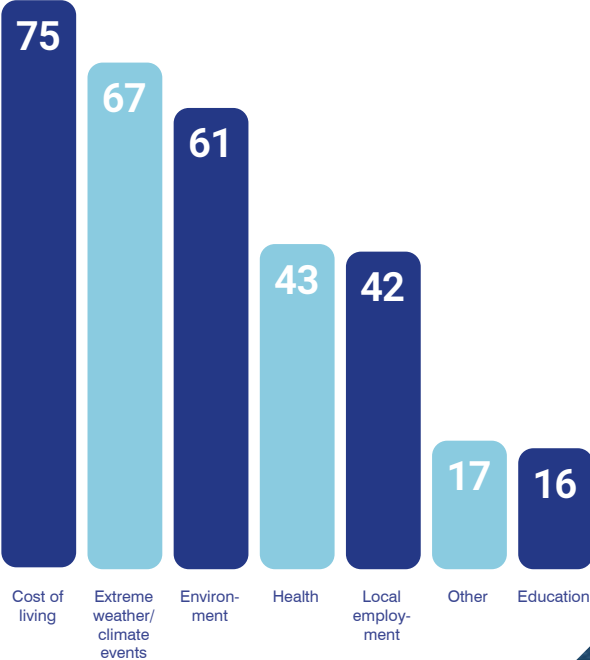
While 57% of community respondents reported that their council is engaged in climate action, more than half were dissatisfied with their local council's climate change response (Figure 14). Only 3% were confident that their council would meet its community-wide emissions reduction targets (where applicable).

"

I am very impressed with what our council already does but that is because I have been able to drill into their plans and reports. Local businesses are unaware of these strategies and so don't get a sense of both urgency and possibility.

"

Survey respondent

Figure 14 What do you think of the climate change response from the following. (%)

- ■ Very satisfied
- ■ Somewhat satisfied
- ■ Neither satisfied or unsatisfied
- ■ Somewhat unsatisfied
- ■ Very unsatisfied
- ■ I don't know

"

Our council talks the talk on climate action but does not have the resources to actually make things happen

"

Survey respondent

OPPORTUNITIES AND RECOMMENDATIONS

Local governments can enhance the effectiveness of community groups, supporting their initiatives to be well-coordinated and impactful. They can also assist in aligning local actions with broader climate mitigation and adaptation strategies.

Table 1 Actions local governments can take to support communities

- Provide regular information to the community regarding climate impacts and adaptation.

- Provide regular information to the community on projects planned or underway and a forum for community input.

- Engage trusted community stakeholders to reach diverse and vulnerable community members.

- Support community groups through grants, access to meeting spaces, governance advice, community awards and contribution to council policies and strategic planning.

- Support community-led initiatives like solar cooperatives and community-owned renewables, empowering communities to contribute to climate goals through local renewable energy production.

- Support community leaders driving local change.

- Advocate for state and federal support of local climate hubs to serve as educational and resource centres for strengthening community advocacy and resilience.

Table 2 Actions community groups, households and business can take, by sector.

STATIONARY ENERGY – ELECTRICITY AND GAS

- Reduce energy consumption to save money, improve comfort and reduce emissions.
- Make use of state or federal energy rebates.
- Upgrade to electric appliances, including air conditioners, heaters, hot water systems and cooktops.
- Install solar or switch to greenpower.

WASTE

- Advocate for stronger waste management regulations and national policies to reduce waste emissions.
- Work together with local governments, environmental groups and industry associations to support waste reduction initiatives and promote circular economy practices.

TRANSPORT

- Use public transport, walking and cycling in everyday activities.
- Consider purchasing an electric vehicle, including electric bikes or scooters.
- Examine local options for EV charging, and advocate to council for on-street car charging if required.
- Consider using car share services where provided.
- For rural and regional areas, upgrade to EVs.
- Avoid flying where possible.

AGRICULTURE AND LAND USE

- Plant trees on properties where appropriate.
- Avoid clearing existing forest.

- TALK to your community about climate impacts.
- JOIN or support local, regional or national community groups.
- ENGAGE with your local, state or national representatives.
- ADVOCATE for climate actions that will support your community.

COUNCIL SURVEY: CORPORATE EMISSIONS

All local governments produce emissions in the delivery of their operations and services.

Corporate emissions come from operations over which a council has the direct ability to introduce and implement change. They include emissions from stationary energy consumption at council-owned or occupied facilities, council's fleet and plant, concrete and asphalt for road works, and council-operated landfills.

Collectively, Australian local governments are directly responsible for

1.5%
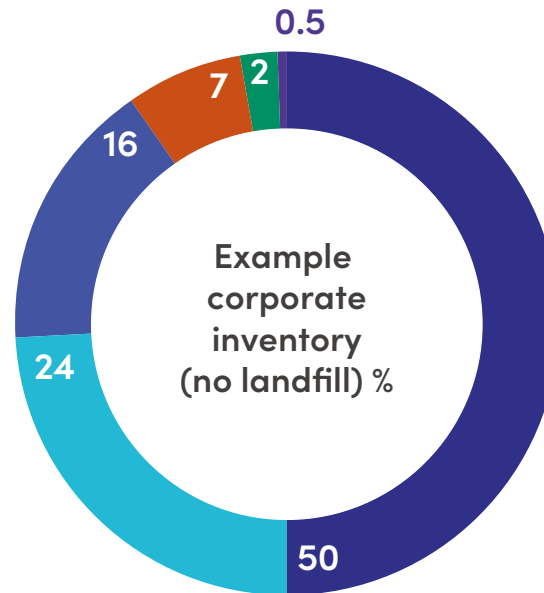
of Australia's total emissions. Councils have significant opportunities to reduce emissions from corporate operations (and subsequently also reduce costs), and tackling these operational emissions is usually the first step councils take on their emissions reduction journey.

By taking active steps to reduce these emissions, councils can directly contribute to national and global mitigation efforts and provide leadership to their communities.

SURVEY RESULTS

Emissions inventories

Corporate emissions inventories provide a quantified breakdown of all emissions sources within Council's operational boundary and will form the baseline against which emissions reductions can be tracked. This then allows councils to identify opportunities for action.

In order to develop an inventory, councils need to collate data on key emissions sources, including:

- Waste – council-managed landfill and waste water use in council owned buildings.
- Stationary energy – electricity and gas use in council-owned facilities, including parks and buildings, as well as electricity for streetlights.
- Transport – fuels used by council and contractor vehicles and plant.
- Concrete and asphalt used in road construction.
- Other minor emissions sources include fugitive emissions from HVAC, lubricants use, stationary use and business travel.

Of the responding councils, 86% had a corporate emissions inventory for council operations. Most were satisfied that their inventory was fairly (58%) or very (33%) accurate. Corporate emissions inventories have been included in annual reports, used to monitor progress on initiatives, and to compare with other councils/organisations or comply with international/national programs (Figure 16). Emissions inventories are developed according to various accounting standards (Figure 17) and methods (Table 3). Seventy-eight percent of councils regularly recalculate their corporate emissions inventories, most often on an annual basis).

Figure 15 Two example corporate inventories.

Example corporate inventory (no landfill) %

	Electricity – Buildings	50%
	Natural gas	24%
	Streetlighting	16%
	Transport	7%
	Water	2%
	Waste	0.5%

Example corporate inventory (with landfill and wastewater treatment) %
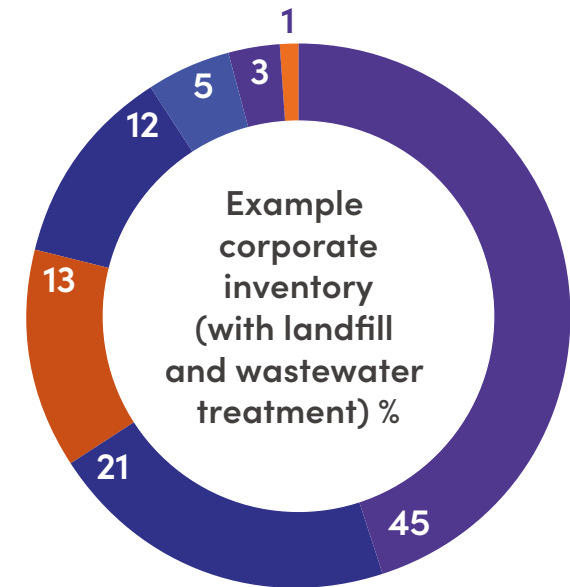
	Waste	45%
	Electricity – Water/wastewater	21%
	Transport fuel	13%
	Electricity – Buildings	12%
	Streetlighting	5%
	Wastewater treatment	3%
	Stationary fuel	1%

Figure 16 How do you use the corporate inventory? (%)

Monitoring progress on initiatives	84
Inclusion in annual reports	57
Comparison to other councils/ organisations	26
Compliance with national/ international programs	22
Other	18

Figure 17 What accounting methods did Council use in the development of it's most recent inventory for council operations? Please tick multiple where appropriate. (%)

National Greenhouse and Energy Reporting (NGERS)	43
Climate Active (formerly known as National Carbon Offset Standard – NCOS)	38
Greenhouse Gas Protocol (GHG Protocol)	23
Australian National Greenhouse Accounts	22
Other	14
Not developed according to standard accounting method	10
Don't know	10
ISO 14064	3
Australian Government Clean Energy Regulator	3
Sustain- ability Reporting Frameworks (e.g., GRI, CDP)	3

Table 3 Tools councils use to develop corporate inventories.

What accounting tools did Council use in the development of its most recent inventory for council operations? Please tick multiple where appropriate:	#	% of all councils with inventory
Our own spreadsheet	43	46
Software such as Agility, Trellis or Kinesis	39	41
Prepared by a consultant	37	39
Bespoke software solutions	9	10
Don't know	3	3
Other	1	1

TARGETS

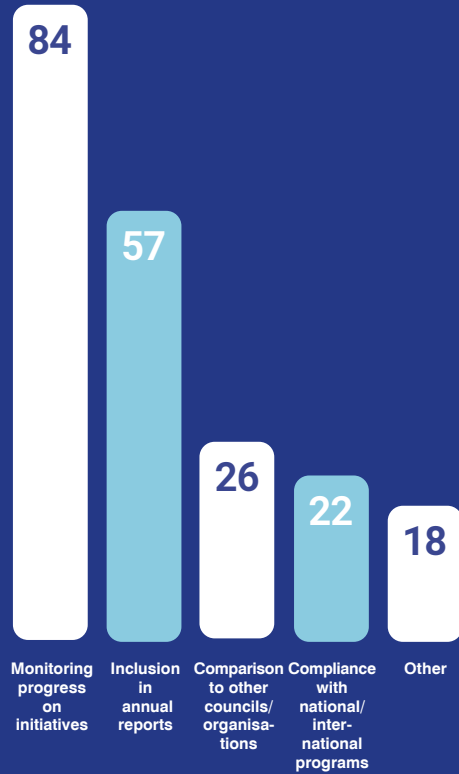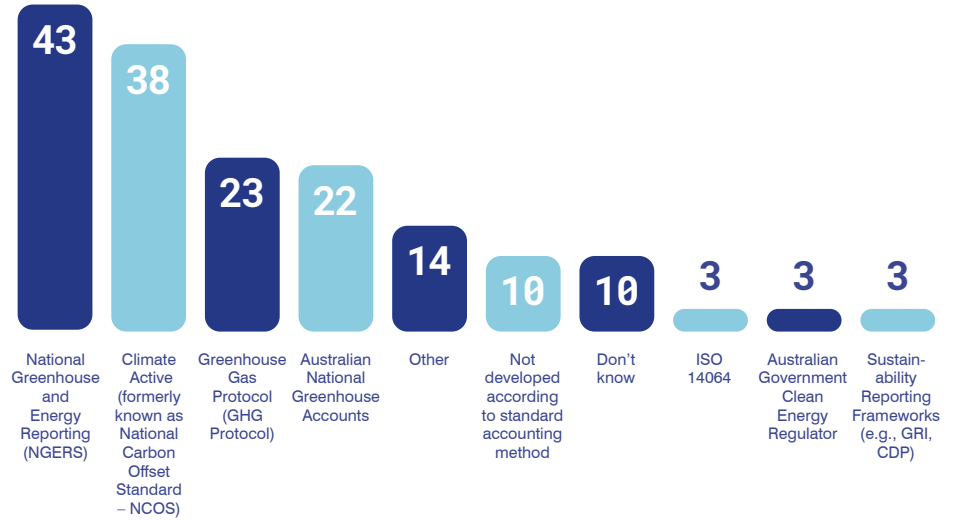Most councils (77%) have or are investigating having (12%) a corporate emissions reduction target. Only 6% did not intend to set a corporate emissions reduction target. Most councils with a target had net zero emissions targets (71%) while others were framed around percentage emissions reduction, renewable energy goals, science derived targets or carbon neutral (Figure 19).

Targets are increasingly set for specific corporate emissions sectors within the council, including fleet and plant, buildings, waste, street lights and water and wastewater emissions (Figure 18).

Most councils are very (11%) or somewhat confident (49%) that they will meet their emissions reduction targets for corporate emissions, while some are not so (30%), or not at all (10%) confident in meeting theirs.

Incorporation of Scope 3 emissions was a key reason for not feeling confident in meeting emissions, and many councils were reluctant to pay for residual emissions.

Figure 18 Do any of the listed sectors have specific targets to reduce greenhouse gas emissions for council operations. (%)

Sector	%
Fleet and plant	68
Buildings (council facilities)	56
Waste	46
Street lighting	34
Other	20
Water and waste water	15
No	2
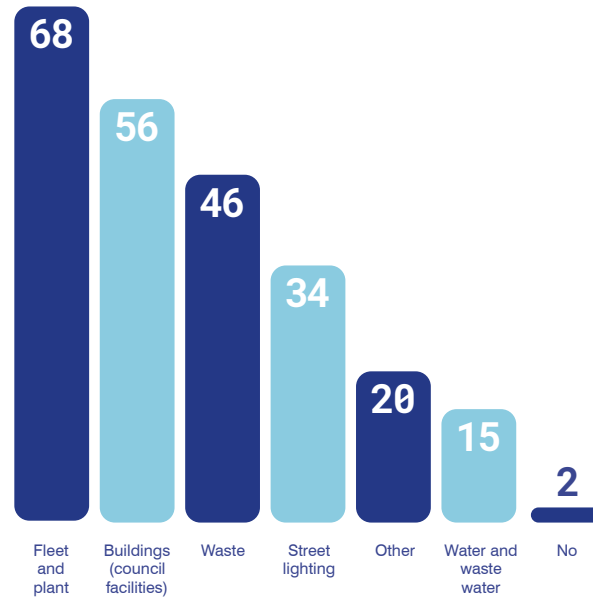
Figure 19 How do you define your target to reduce greenhouse gas emissions for council operations. (%)

Definition	%
Net zero emissions	71
Percentage emissions reduction, e.g. reduce emissions by 30% by 2030	20
100% renewable energy	19
Carbon neutral	15
Science-derived target	10
Zero emissions without offsetting	5

"
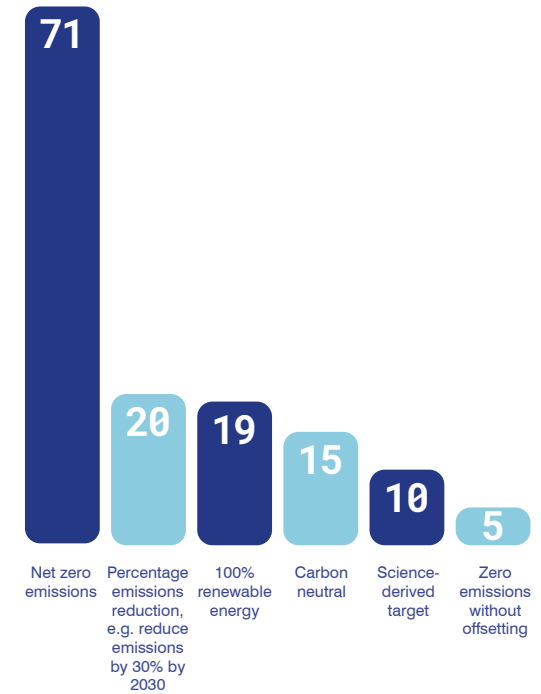
Our target is carbon neutral for Scopes 1 and 2 by 2030, so we monitor these well. But as Scope 3 is so difficult, it's excluded from our target and at the moment, from our monitoring. Even if we meet our carbon neutral target for 1 & 2, there's no way we'll be carbon neutral for Scope 3 by 2030, and we do not want to pay for offsets.

"

Survey respondent

Councils responsible for landfill emissions also feel constrained in meeting targets, as they are reliant on both community behaviour to reduce and recycle waste appropriately, as well as on state or federal government schemes to deliver Food Organics Garden Organics (FOGO) diversion or gas flaring controls.

CARBON BUDGETS AND SCIENCE DERIVED TARGETS

Carbon budgets refer to the total quantity of greenhouse gases that can be emitted whilst keeping global warming below a specified target, most commonly 1.5°C or 2°C. A science-derived target is one that takes into account the carbon budget when determining the timeframe of a net zero emissions target.
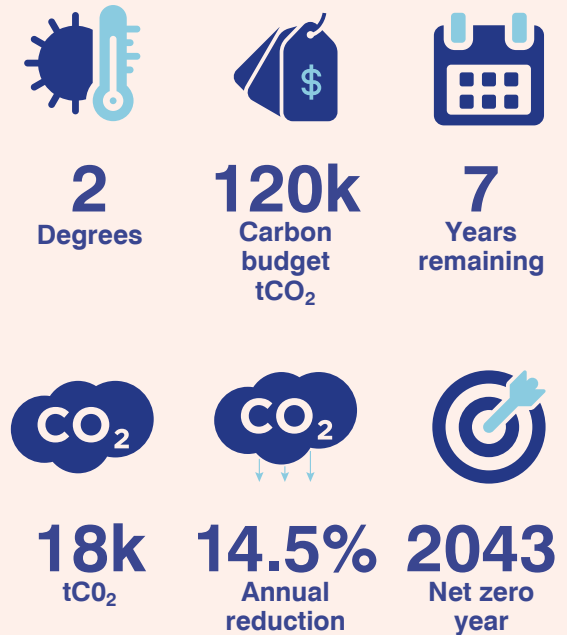
The global carbon budget is updated annually by the Global Carbon Project and can be scaled to the national and sub-national level, including to the level of local government operations. The Science Based Targets initiative (SBTi) provides guidance on how this can be done. One method, developed by Ironbark using SBTi methodology, is based on the Climate Change Authority's national carbon budget for Australia, which recognises

that countries like Australia with a high per capita emissions and greater financial capacity to reduce emissions should do so more quickly, while developing countries will need to increase their per capita emissions to improve living standards. This national carbon budget is scaled to the local government operational level using metrics such as fleet composition, staff profile and current emissions.

Carbon budgets can provide local governments with a clear and tangible link between the magnitude of emissions reduction required and the global warming goal, either 1.5˚C or 2˚C of warming. This can be used to inform and support local government decision-making by ensuring that the timing and trajectory of emissions reduction plans and net zero targets are commensurate with the problem. A council's science-derived target should be considered when

developing an emissions reduction goal, and a council's target should be at least as ambitious as its science-derived target.

Figure 20 An example 2°C carbon budget and science derived target for a typical regional council.

2
Degrees

120k
Carbon budget tCO_2

7
Years remaining

18k
tCO_2

14.5%
Annual reduction

2043
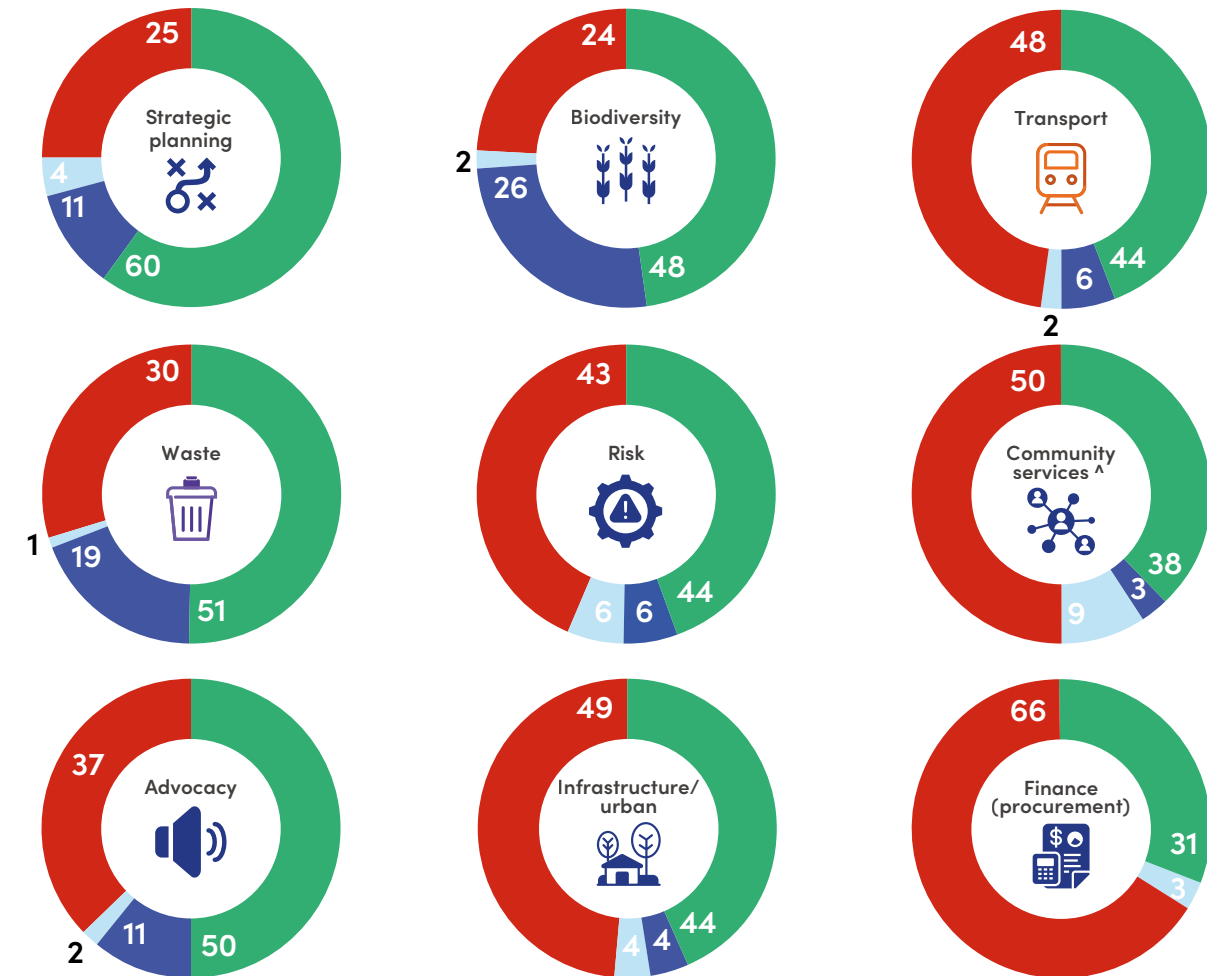Net zero year

PROJECTS, ACTIONS, STRATEGIES AND PLANS

Most councils felt climate change is very well or moderately well embedded into strategic planning, advocacy, biodiversity and waste, with room for improvement in transport, infrastructure, community services and risk, and not well embedded in finance/procurement. (Figure 21).

Most councils

(95%)

have or intend to have, strategies, implementation plans and/or policies in place to reduce their corporate emissions. Strategies were often developed for specific areas of action (Figure 22).

Figure 21 How well do you feel climate change is embedded in the following areas in your council? (%)

Strategic planning — 25, 60, 11, 4

Biodiversity — 24, 48, 26, 2

Transport — 48, 44, 6, 2

Waste — 30, 51, 19, 1

Risk — 43, 44, 6, 6

Community services ^ — 50, 38, 9, 3

Advocacy — 37, 50, 11, 2

Infrastructure/urban — 49, 44, 4, 4

Finance (procurement) — 66, 31, 3

^ eg. libararies, customer service, leisure centres, family services

🟢 Moderately well 🔵 Very well 🔴 Not well 🔵 I don't know

Figure 22 For each of the following corporate emissions sources, which areas have (or are intended to have) effective strategies for emissions reductions? Please tick all that apply. (%)

86	83	72	71	32	11	3
Buildings (council facilities)	Fleet and plant	Street lighting	Waste	Water and waste water	Other	None
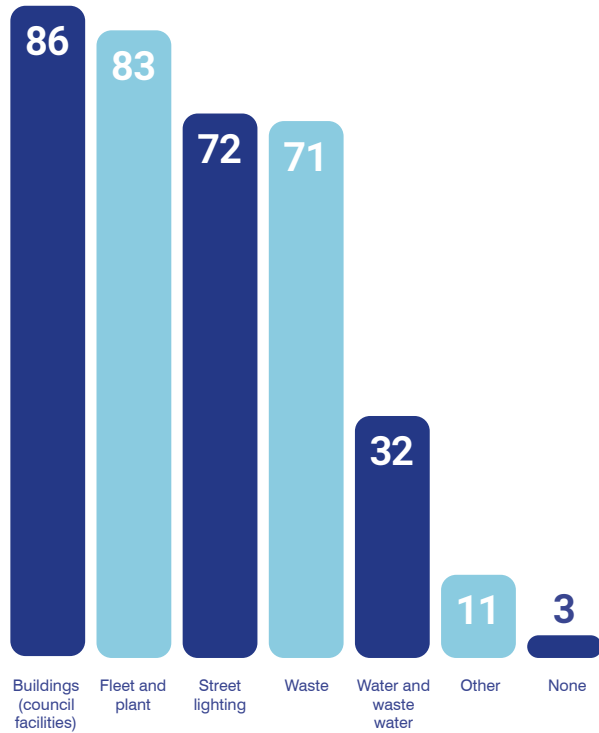
Key drivers to reduce corporate emissions are summarised in Figure 23, with assigning responsibilities to staff, understanding the costs/benefits of actions, management support and active and engaged communities the top drivers.

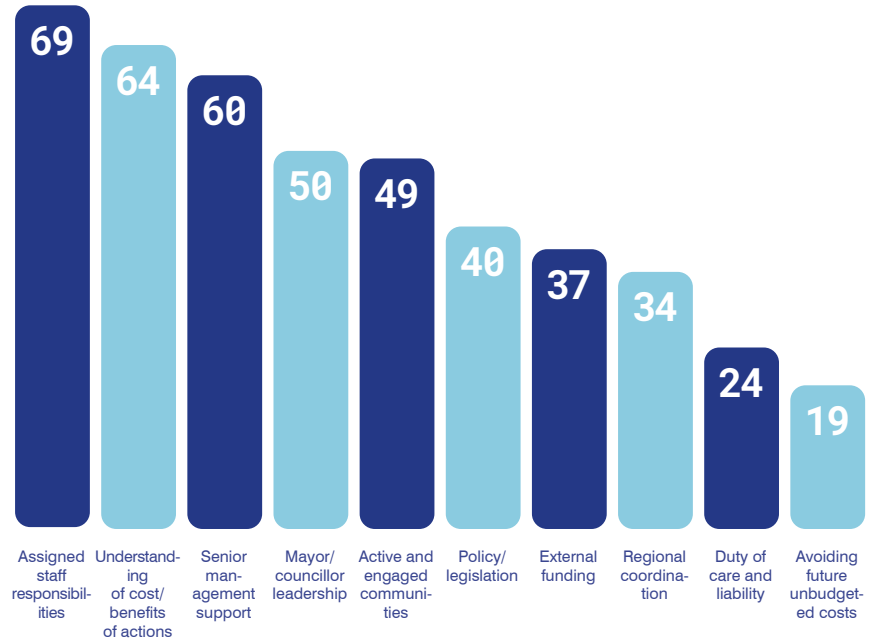**Figure 23** What are the key drivers for climate action to reduce corporate greenhouse gas emissions at your council? (%)

69	64	60	50	49	40	37	34	24	19
Assigned staff responsibilities	Understanding of cost/ benefits of actions	Senior management support	Mayor/ councillor leadership	Active and engaged communities	Policy/ legislation	External funding	Regional coordination	Duty of care and liability	Avoiding future unbudgeted costs

Councils have already implemented a range of actions to reduce emissions across the stationary energy, transport and waste sectors as well as advocacy measures (Figures 24–27).

Figure 24 Have you implemented any of the following actions that councils can undertake to reduce emissions from council operations. (%)
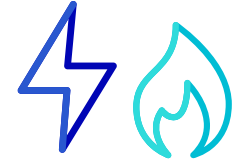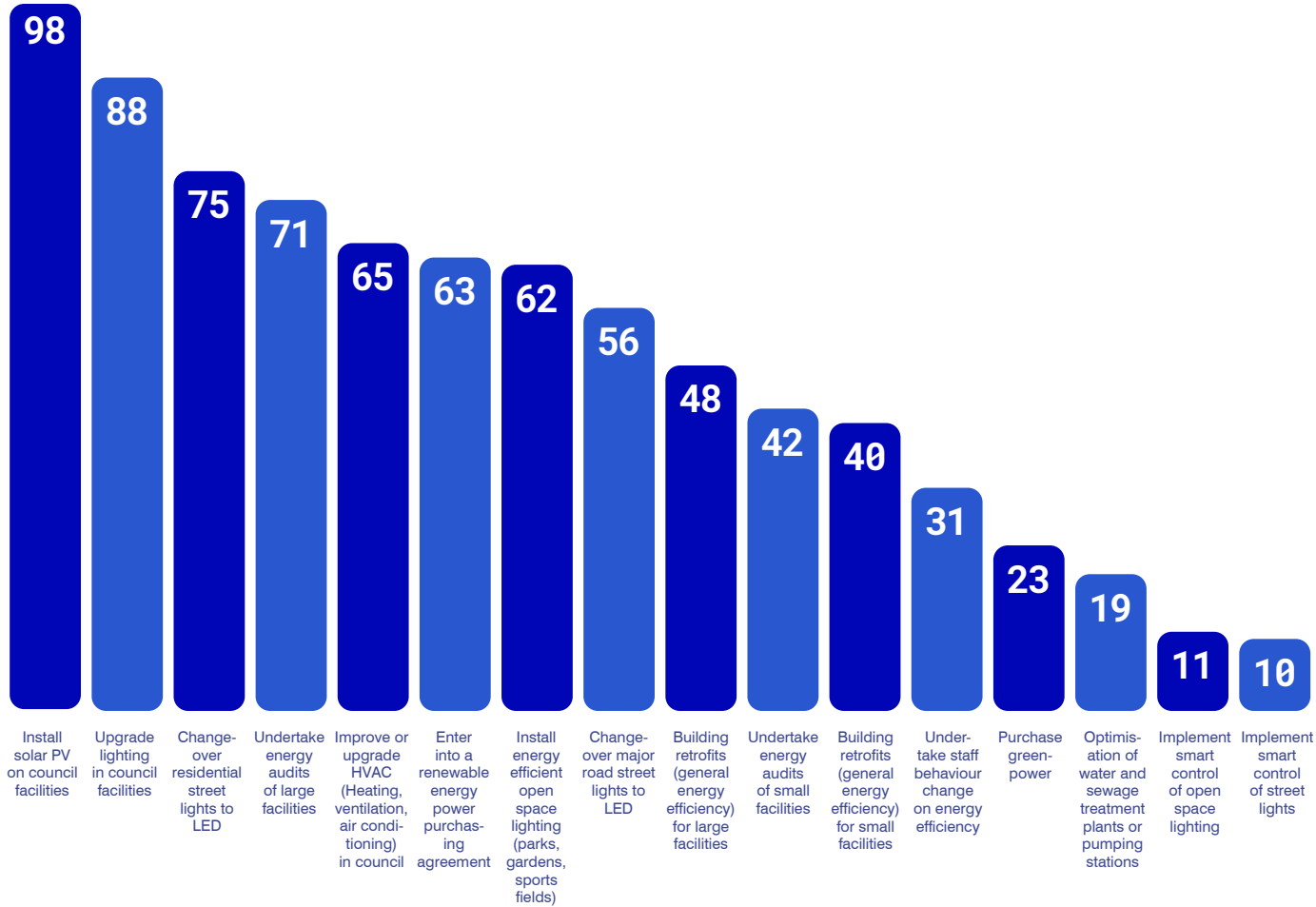
STATIONARY ENERGY

Action	%
Install solar PV on council facilities	98
Upgrade lighting in council facilities	88
Change-over residential street lights to LED	75
Undertake energy audits of large facilities	71
Improve or upgrade HVAC (Heating, ventilation, air conditioning) in council	65
Enter into a renewable energy power purchasing agreement	63
Install energy efficient open space lighting (parks, gardens, sports fields)	62
Change-over major road street lights to LED	56
Building retrofits (general energy efficiency) for large facilities	48
Undertake energy audits of small facilities	42
Building retrofits (general energy efficiency) for small facilities	40
Undertake staff behaviour change on energy efficiency	31
Purchase greenpower	23
Optimisation of water and sewage treatment plants or pumping stations	19
Implement smart control of open space lighting	11
Implement smart control of street lights	10

Figure 25 Have you implemented any of the following actions that councils can undertake to reduce emissions from council operations. (%)
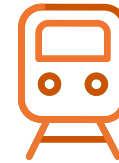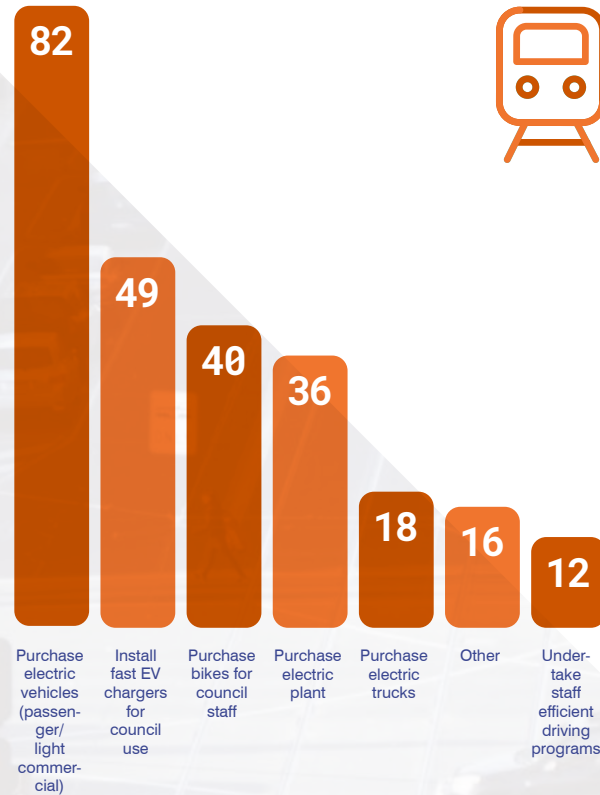
FLEET

Value	Action
82	Purchase electric vehicles (passenger/light commercial)
49	Install fast EV chargers for council use
40	Purchase bikes for council staff
36	Purchase electric plant
18	Purchase electric trucks
16	Other
12	Undertake staff efficient driving programs

Figure 26 Have you implemented any of the following actions that councils can undertake to reduce emissions from council operations. (%)

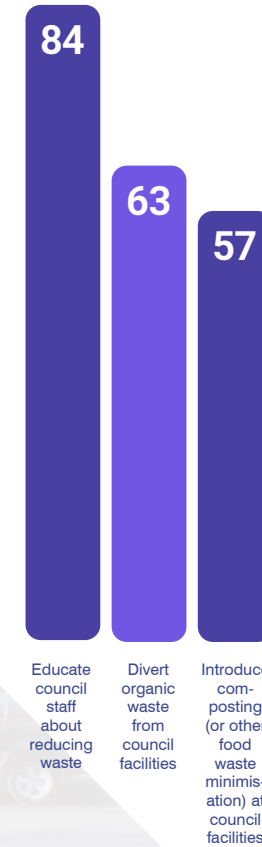**WASTE (FROM COUNCILS OWN OPERATIONS)**

Value	Action
84	Educate council staff about reducing waste
63	Divert organic waste from council facilities
57	Introduce composting (or other food waste minimisation) at council facilities

Figure 27 Have you implemented any of the following actions that councils can undertake to reduce emissions from council operations. (%)
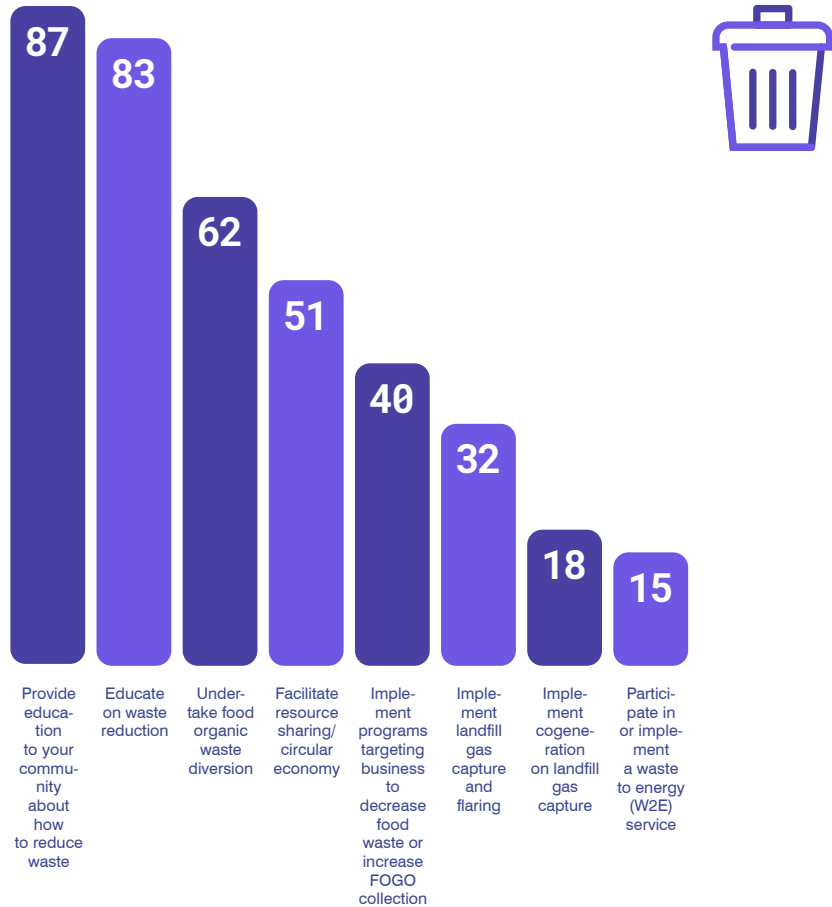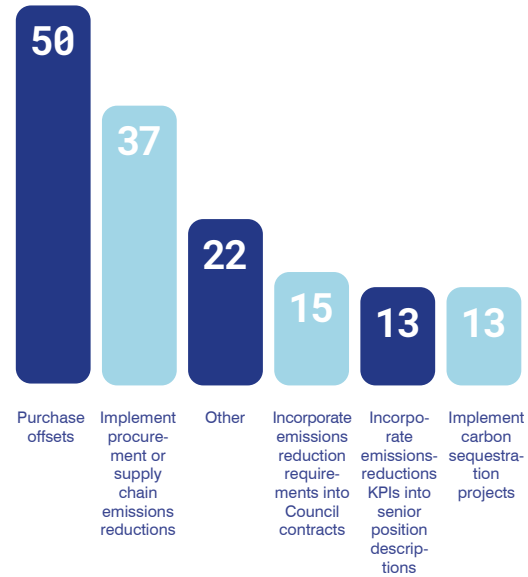
WASTE (MORE BROADLY)

Value	Category
87	Provide education to your community about how to reduce waste
83	Educate on waste reduction
62	Undertake food organic waste diversion
51	Facilitate resource sharing/ circular economy
40	Implement programs targeting business to decrease food waste or increase FOGO collection
32	Implement landfill gas capture and flaring
18	Implement cogeneration on landfill gas capture
15	Participate in or implement a waste to energy (W2E) service

Figure 28 Have you implemented any of the following actions that councils can undertake to reduce emissions from council operations. (%)

Value	Category
50	Purchase offsets
37	Implement procurement or supply chain emissions reductions
22	Other
15	Incorporate emissions reduction requirements into Council contracts
13	Incorporate emissions-reductions KPIs into senior position descriptions
13	Implement carbon sequestration projects

Implementing those actions generally went reasonably well (49%), but some were hindered by other priorities or resourcing constraints (43%).

BUDGETS

The survey asked about the budget allocation towards reducing emissions from council operations in 2022/23. A range of responses were provided, noting that the question did not include staff time. Rather, it was related to project planning, delivery, implementation, management, development of strategies, plans or business cases, communication and consultants.

Council budgets to reduce corporate emissions ranged from $0-4 million, with median budgets for all except capital cities well under $100,000 and around 30% of responding councils having no budget. Resources were used for a range of projects, including emissions inventories, solar panel installations, light replacement programs, capping landfills, Scope 3 emissions, major projects, capital upgrades, purchase of EVs and EV charging, energy audits and regional alliance memberships.

Many responses noted it was difficult to attribute funding accurately as climate actions are embedded across numerous business areas of Council. Some councils noted that recovery from extreme events such as flooding or fire have taken priority over mitigation work.
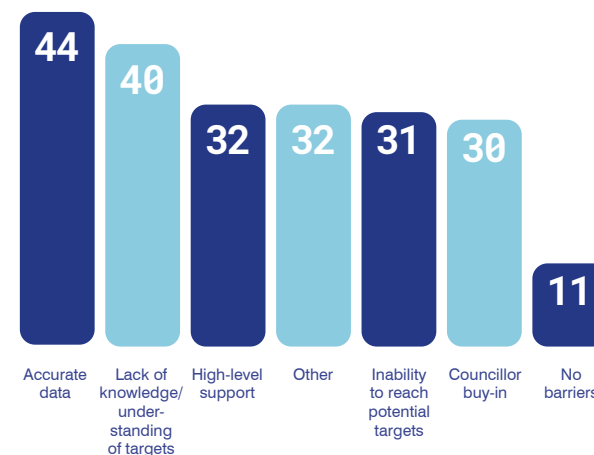
Table 4 Council budget allocation to corporate emissions reduction.

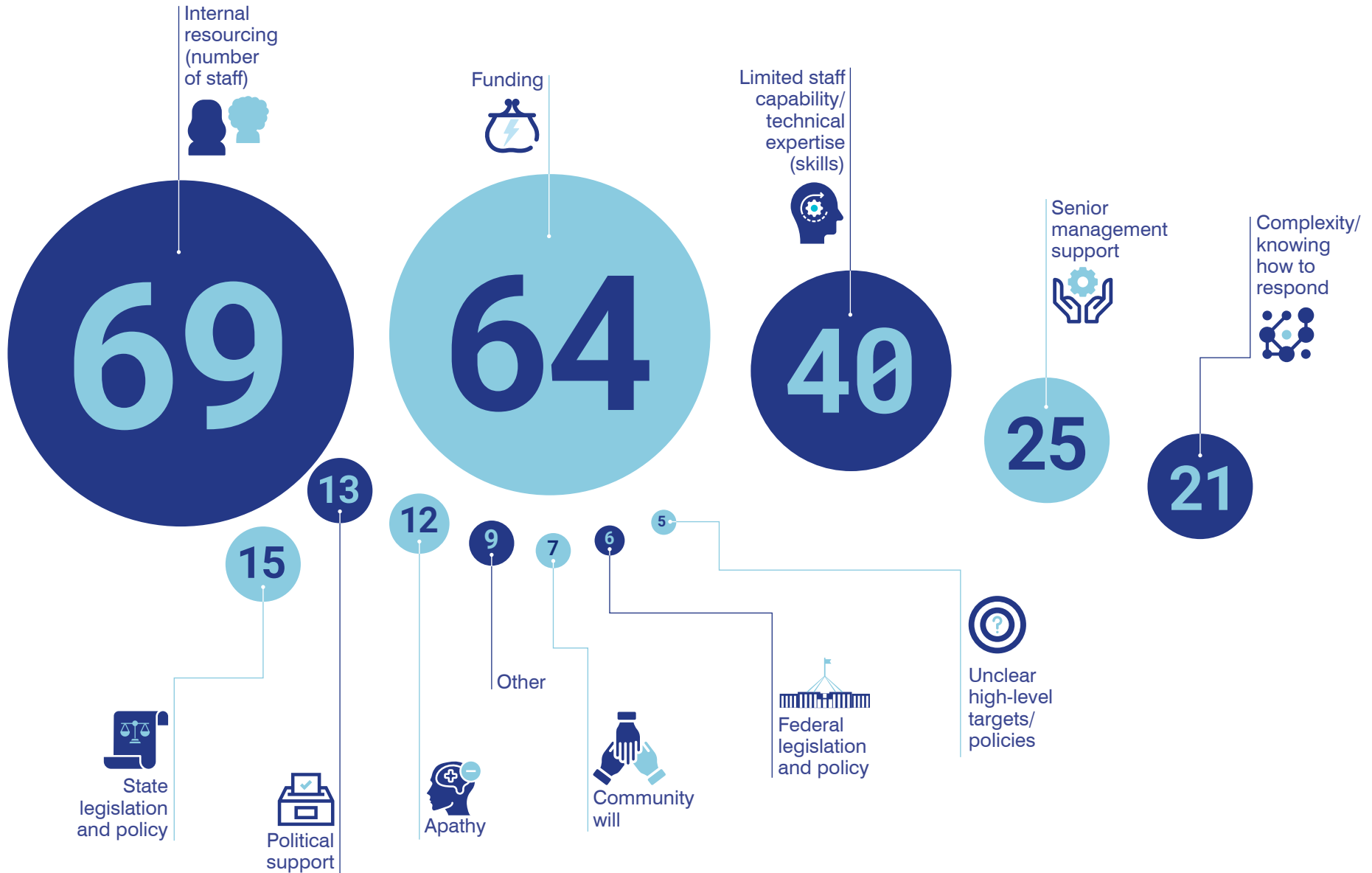|	Max. budget	Median budget	% with $0 budget
Regional centre	$4m	$61k	27%
Growth area – urban fringe	$1.053m	$50k	35%
Rural	$2.5m	$35k	26%
Capital city	$3.5m	$255k	27%
All councils	$4m	$64.5k	28%

BARRIERS

Key barriers to setting a corporate emissions target include accurate data, lack of knowledge or understanding of targets as well as internal support (Figure 29).

Figure 29 In general, what are some of the key barriers you've found in setting targets for greenhouse gas emissions from council operations? Please select your top three barriers. (%)

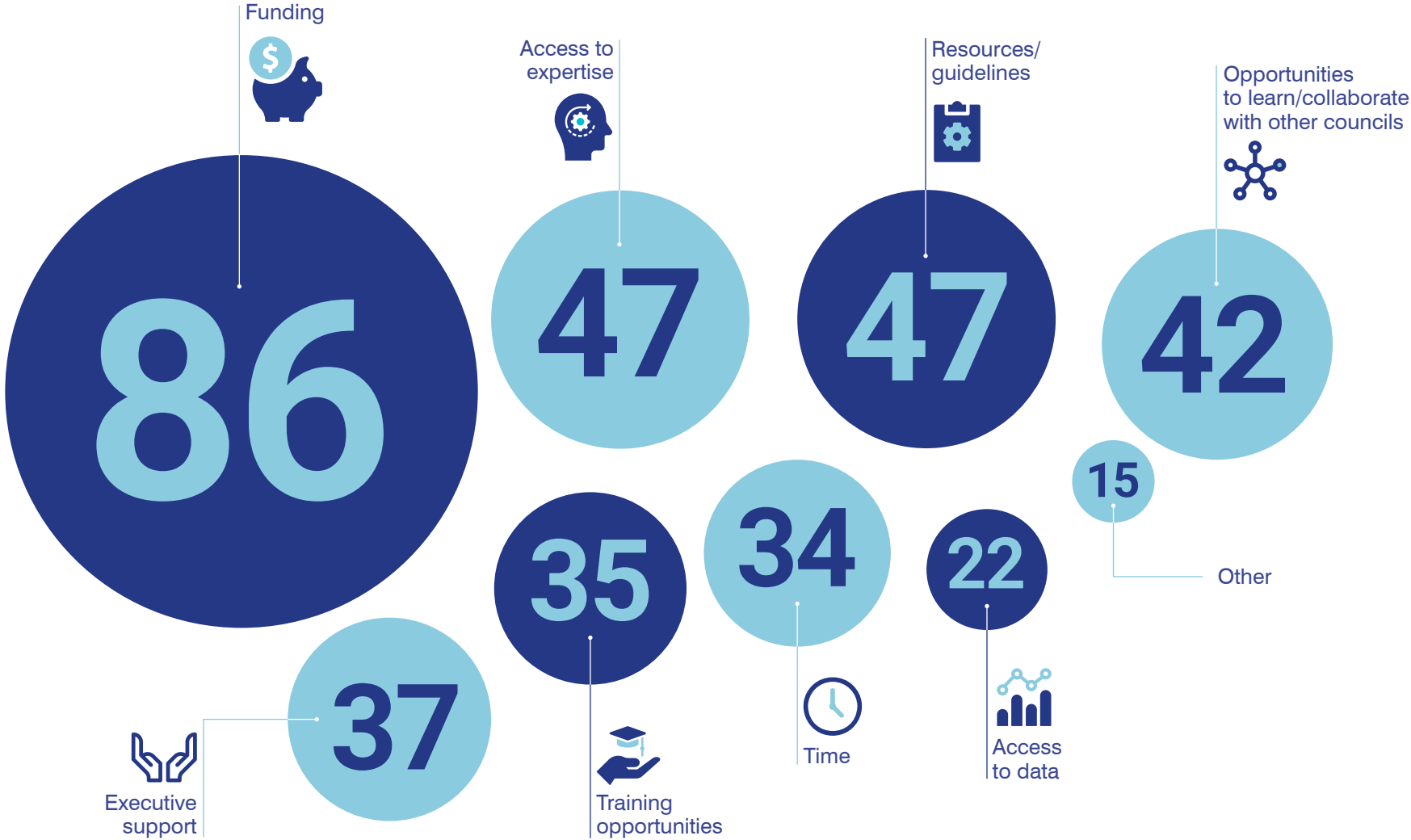| Barrier	%
Accurate data	44
Lack of knowledge/understanding of targets	40
High-level support	32
Other	32
Inability to reach potential targets	31
Councillor buy-in	30
No barriers	11

Key barriers to implementing corporate emissions reduction actions included internal resourcing, funding, limited staff capability, and senior management support (Figure 30).

Figure 30 In general, what are some of the key barriers to reducing greenhouse gas emissions from council operations? Please select your top three barriers. (%)

Internal resourcing (number of staff): **69**

Funding: **64**

Limited staff capability/ technical expertise (skills): **40**

Senior management support: **25**

Complexity/ knowing how to respond: **21**

State legislation and policy: **15**

Political support: **13**

Apathy: **12**

Other: **9**

Community will: **7**

Federal legislation and policy: **6**

Unclear high-level targets/ policies: **5**

Funding, access to expertise, guidelines and opportunities to learn and collaborate with other councils were identified as key support to overcome these barriers.

Figure 31 What support do you feel would help you to overcome these barriers? (%)

Funding
86

Access to expertise
47

Resources/ guidelines
47

Opportunities to learn/collaborate with other councils
42

Executive support
37

Training opportunities
35

Time
34

Access to data
22

15
Other

OPPORTUNITIES AND RECOMMENDATIONS

Councils have taken a lead in addressing their own corporate emissions since the late 1990s. For many councils this has taken the form of emissions inventories, energy audits, improved energy efficiency, and installing renewable or alternative energy systems like solar PV and cogeneration plants, setting fleet targets, managing landfill and FOGO.

All of these actions save councils money over time and the primary barrier to implementation is upfront costs or staff resources. National and state programs to support implementation of these tried and tested actions will lead to rapid emissions reductions and savings to councils' budget lines.

Most councils surveyed are working to a

net zero

corporate emissions target, generally no later than 2030. They want to demonstrate leadership to the community in emissions reductions and climate change management, and implement projects that demonstrate cost-savings and good value to Council.

While many councils have plans or policies to reduce corporate emissions, the actions lay across multiple departments. An organisational shift is often needed to embed climate change across operations and decision-making to ensure targets are met and to properly manage risk.

There are many strategies that are effective in assisting councils to reach their emissions reduction.

Local governments can:
- **Set a corporate emissions reduction target using Science Derived (or Based) Targets as a minimum.**
- **Develop a corporate emissions reduction plan including defined targets, actions and timelines.**
- **Integrate Scope 3 reporting into corporate inventories and prepare for potential mandatory reporting.**
- **Advocate for state and federal government support to scale up and amplify effective programs for all councils.**

The following pages provide an overview of the current most effective activities local governments can implement, for each sector, and how state and federal governments can support them to minimise corporate emissions.

STATIONARY ENERGY

Electricity from buildings and street lighting can be up to 100% of a council's corporate energy emissions.

Local governments have been actively improving the efficiency of these services for decades, and the advent of LED street lighting has reduced energy from this source by 50–80%.

Efficiency projects in facilities have driven significant cost and energy improvements, however in many areas expanding service demands and growth has increased the overall energy use from these sources.

Effective interventions by the federal government include direct funding of local governments for community infrastructure such as the Community Energy Upgrades Fund. Grant funding such as the Clean Energy Upgrades Fund is helpful to boost these resources.

Natural gas remains a key component of many councils' energy consumption (although some councils are not connected to the gas network) and degasification of facilities is a key action to pursue.

Power Purchase Agreements (PPAs) for corporate electricity consumption are becoming commonplace and driving considerable emissions reductions across councils' portfolios.

Renewable Electricity PPAs

PPAs help local governments reduce their greenhouse gas emissions by switching to renewable energy. When a local government signs a PPA, they agree to buy renewable energy at a set price for 5 to 20 years. This reduces their reliance on fossil-fuel-powered electricity and lowers their carbon footprint.

To ensure that the emissions reductions are real, it's essential to retire renewable energy certificates such as Large-scale Generation Certificates. Retiring these certificates proves that renewable energy is exclusively used by the local government and not counted by others. Electricity sourced through PPAs is treated as grid-imported electricity, unless LGCs have been retired.

PPA examples from Australian local governments include:

- The City of Sydney has been sourcing electricity from wind and solar farms in regional New South Wales since 2020. The PPA includes supplying electricity to approximately 115 buildings (including libraries, community halls, office buildings, 75 parks, 5 pools and 23,000 street lights).
- The City of Newcastle has sourced 100% of its energy needs from renewable sources since 2019.
- The Victorian Energy Collaboration project involved 60 Victorian councils and is Australia's largest local government emissions reduction initiative to date. The project will cut 260,000 tonnes of carbon emissions, equivalent to removing 90,000 cars from the road.
- The Western Sydney Regional Organisation of Councils (WSROC) has facilitated a 100% renewable PPA involving 34 NSW councils in a 7-year agreement.
- Southern Sydney Regional Organisation of Councils (SSROC) Renewable Energy Supply Deal sources electricity from solar farms in NSW. The PPA includes the supply of electricity to more than 300 major council facilities and more than 3,400 small sites managed by the 25 participating councils.
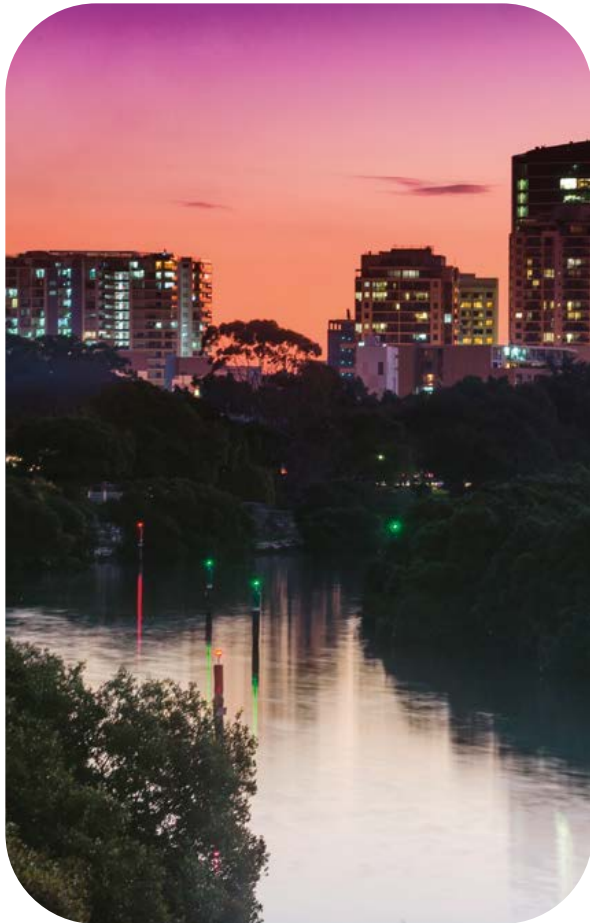
Parramatta Council Street lighting upgrade

Parramatta Council has been progressively upgrading all old, inefficient street lighting in the Endeavour Energy and Ausgrid distribution areas to energy-saving LEDs.

The Council has converted 91% of all streetlights to LEDs, with the inclusion of smart controllers on major road lighting saving further energy and emissions by reducing over-lighting. The project is now saving Council more than 3,000 tCO_2-e per year, and will save at least $15m in operational costs over the life of the assets (20 years).

Council was able to leverage various sources of funding for the project including NSW Energy Savings Certificates and funding through the Federal Government's Local Roads and Community Infrastructure funding stream.

The inclusion of smart controllers on major road lighting combined with detailed design analysis and dimming has enabled Council to achieve an additional

46%

energy and greenhouse savings on top of the basic LED upgrade. The smart lighting element of Council's LED upgrade program places it at the leading edge of street lighting upgrade, design and management in Australia and the world.

City of Launceston Aquatic Centre

A lot of the focus regarding greenhouse gas emissions in Launceston is on landfill, representing 89% of corporate emissions. However, gas represents the second largest emission source and it is only used at four sites.

Getting the Launceston Aquatic Centre off gas boilers reduced Council's emissions by approx. 1,400–1,600 tCO$_2$e per year with a projected net savings of

$650k

over the following 12 month period. It reduced Council's gas related emissions by more than half.

Energy actions

Table 5 Actions to support corporate emissions reductions in the energy sector.

Local government

- Participate in renewable energy PPAs.
- Surrender renewable energy certificates to retain the emissions savings from renewable energy projects.
- Prepare feasibility studies to support CEUF applications.
- Install large and small-scale solar photovoltaic systems and, where appropriate, battery storage.
- Electrify all facilities.
- Implement high ESD standards for new builds and upgrades and demonstrate what can be mandated by other levels of government for the entire built environment.
- Implement systemic energy efficiency upgrades and retrofits for council buildings.
- Optimise the operation of major building and facility equipment.

- Build staff capacity to minimise energy and maintain optimised performance of equipment.
- Upgrade to high-efficiency computer servers, and optimise virtualisation and computer room air conditioning distribution.
- Upgrade street lights and open space lighting to LEDs and consider smart lighting.
- Develop technical specifications to replace minor works, plant and equipment.

State government

- Replicate policies like the Victorian Local Government Energy Saver Program.Continue and replicate programs like Victorian Energy Upgrade and Energy Saver Program.

- Support Smart Cities funding to target council street upgrades.
- Develop ESD guidance resources for council buildings.
- Support business renewable buying groups.

Federal government

- Deliver on the no-cost action of recognising Council targets and ambition in NDCs through Locally Determined Contributions (LDCs).
- Scale up support programs like the $100 million Community Energy Upgrades Fund.
- Fund smart lighting upgrades nationally.
- Provide funding and resources to enable regional, state or national local government corporate programs to improve efficiency and scale of progress.

TRANSPORT

Councils generally own and operate a range of fleet, including passenger vehicles, utes and specialised vehicles and waste disposal trucks.

Transport fuels can make up a significant proportion of a council's corporate emissions profiles. Typical solutions for reducing transport fuel costs, such as reducing the size of Council's fleet, reducing vehicle usage and purchasing more fuel-efficient vehicles, can help to lower emissions but do not deliver the step change required to mitigate climate change.

Fleet transition is an important, visible action that councils can take, and has additional benefits such as improving the second-hand market for EVs.

Charging the regions

The Central Victorian Greenhouse Alliance (CVGA) worked in partnership with 13 local councils and the Victorian Government to deliver the largest public local government EV fast charging network in Australia, with the aim of addressing the Electric Vehicle charging station gaps identified in the Charging the Regions Case Study project. The funding fast tracked investment in key towns to ensure there is a dense network of charging stations in the Mallee and Loddon Campaspe region, as well as other regions in Victoria.

The project installed a mix of DC fast chargers, located on council land and in locations identified in collaboration with participating councils. In total, 23 electric vehicle charging stations were installed across partner councils. The project supports regional jobs and tourism and encourages EV purchases locally.

Western Sydney Electric Vehicle Roadmap 2022

The Western Sydney Electric Vehicle Roadmap 2022 demonstrates the role councils can play in the transition to EVs, alongside the barriers to wider EV uptake.

Developed by eight local governments under the Western Sydney Regional Organisation of Councils, the report explores the increase in capital costs for more expensive vehicles and the installation of charging infrastructure. It demonstrates that electric vehicle investment is likely to bring about a positive return within the next decade.

Councils should invest in joint purchasing, financing, and grant applications to build skills surrounding the procurement and use of charging infrastructure.

Transport actions

Table 6 Actions to support corporate emissions reductions in the transport sector.

Local government

- Develop EV fleet transition plans, starting with passenger fleet before moving to vans and utes.
- Establish targets for fleet emissions reduction.
- Install EV charging stations at council facilities.
- Implement vehicle sharing programs.
- Undertake feasibility studies and trials, and monitor technological advancement for heavy vehicles and light and heavy plant.

State government

- Support the installation of EV charging infrastructure through resourcing and strategic planning.
- Provide grants for fleet purchasing and building electricity upgrades to support EV capacity.

Federal government

- Create low emissions standards for new vehicles.
- Expand targets for EV adoption rates.
- Create incentive schemes to expand the EV market, improving the range of brands and models, in particular for the lower end of the market.
- Support and build upon the National Electric Vehicle Strategy.
- Support the development of zero emissions specialist fleet vehicles like utes, street sweepers and garbage trucks.

WASTE

For councils operating landfills, emissions from waste can account for the majority of their corporate emissions.

....

While there are many known solutions to reducing and eliminating emissions from waste, councils need to be able to balance the long lead times required to change waste management contracts and the amalgamation of large volumes required to ensure the economic viability of some alternative waste treatments.

Water supply and the treatment of wastewater can also contribute a significant amount of emissions, particularly in some regional and rural councils. Similar to landfill waste, the treatment processes for wastewater directly impacts on the emissions from this source.

Some treatment processes are almost zero emissions, whilst others have significant emissions. The investment required and long lead times for changing processes can delay emissions reduction activities.

Albury City Waste Management

The Albury City Waste Management facility has implemented Food Organics Garden Organics collection (FOGO), biogas collection and a solar farm to reduce emissions at the site. It is also trailing a commercial food waste project that uses black soldier fly larvae to consume food waste and turn it into a high-quality protein for animal food and agricultural soil conditioner for agricultural uses, all while reducing waste management costs.

The trial should provide solutions to commercial and hospitality businesses who have been recently mandated to manage their organic waste by 2025 under the NSW Government's Waste and Sustainable Materials Strategy 2041.

Waste actions

Table 7 Actions to support corporate emissions reductions in the waste sector.

Local government

- Develop sustainable procurement policies and guidelines.
- Implement flaring for landfills operated by Council.
- Advocate for landfill flaring where this is subcontracted out to a third party, or make it a condition of service.
- Performance contracting for recycling and waste services.
- Implement complete Scope 3 emissions tracking to understand where emissions are occurring from procurement and waste activity.
- Provide FOGO collection services.

State government

- Establish waste reduction targets and reporting.
- Develop and incentivise circular economy strategies.
- Regulate recycled material use
- Establish criteria for environmentally preferable products.

Federal government

- Regulate single-use plastics.
- Fund local waste reduction programs and sustainable packaging research.
- Develop recycling and composting regulations for residential, commercial and industrial operations.
- Mandate and provide guidance on sustainable procurement.

CARBON OFFSETS

Some councils choose to purchase carbon offsets to offset some or all of their corporate emissions.
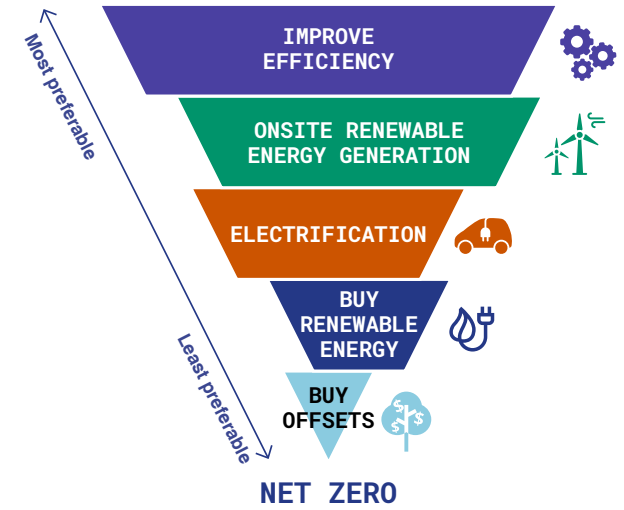
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Carbon offsets fall at the bottom of the emissions reduction hierarchy (Figure 32), but will need to be purchased for most councils to claim net zero emissions.

Purchasing carbon offsets should be the very last step in emissions reduction strategies, only undertaken after all possible measures to directly reduce emissions have been exhausted. The science based targets initiative currently only allows carbon credits to be used to neutralise residual emissions in the long term.

Figure 32 Carbon offsets emissions reduction hierarchy.

Most preferable

IMPROVE EFFICIENCY

ONSITE RENEWABLE ENERGY GENERATION

ELECTRIFICATION

BUY RENEWABLE ENERGY

BUY OFFSETS

Least preferable

NET ZERO

The carbon offsets market is complex and offsets vary in quality. In purchasing carbon offsets, councils should consider the following:

Quality and verification

Ensure that the offsets are certified by reputable third-party standards with preference given to standards accredited by the Integrity Council for the Voluntary Carbon Market (e.g., Gold Standard, Verified Carbon Standard) to verify their validity and effectiveness.

Additionality

The reductions achieved by a project need to be 'additional' to what would have happened if the project had not been carried out (i.e. continued as business-as-usual).

For instance, if a project is viable in its own right, say through the sale of electricity, then it should not be used as an offset project as it would have been undertaken regardless of investment secured through carbon markets.

Council should also be mindful of project types that are more likely to have greater additionality, such as carbon removal and sequestration activities.

Social or environmental harm

Westpac was recently found to be purchasing offsets linked to the tobacco industry.

Permanence

Understand how standards deal with non-permanence and measures to ensure that emissions won't be released into the atmosphere at a later date, e.g. fire prevention plans should be in place to avoid forests being damaged by fire and releasing the stored carbon.

Co-benefits

Well-designed carbon offset projects can have important social, cultural, economic and broader environmental co-benefits.

Alignment with Council values and priorities

For example, purchasing offsets that support indigenous communities to align with a council's Reconciliation Action Plan.

Transparency

To avoid accusations of greenwashing, it is best to be transparent about the types of offsets that are being purchased with reference to the ACCC Making Environmental Claims guidelines.

Some councils have suggested that they could use their own tree planting projects to offset their emissions. Trees for Life estimate that five trees are needed to offset one tonne of carbon over their lifetime. A council with 3,000 tCO_2e to offset would therefore need to plant 15,000 trees every year. Tree planting of the scale required by most councils for offsets is likely to require partnerships and regional collaboration, particularly for urban councils.

NAGA and EAGA carbon offset reports

There is ongoing debate across the sector regarding approaches to offsetting. There is a need for increased scientific, equitable, credible and transparent rules around carbon offsets, as well as opportunities for skill sharing and joint procurement. Recent reports prepared for Northern Alliance for Greenhouse Action (NAGA) and Eastern Alliance for Greenhouse Action (EAGA) outline the current state of play.

North Central Catchment Management Authority

The North Central Catchment Management Authority (NCCMA), in collaboration with four local councils, is supporting local restoration of habitat and leveraging carbon offset requirements with its Community Carbon Pilot.

Through the pilot, they are exploring options to support councils to meet their net zero pledges and to offset residual emissions locally and create co benefits for the local community. The Pilot supports the development of program design, coordination and effective contractual arrangements to support bespoke locally measurable, credible and verifiable carbon offsets.

The project involves matching council areas with high emissions reduction targets with others that have high carbon offset potential. It supports local community groups and private landholders to undertake natural resource management projects, and supports a local revegetation industry by leveraging funding into local projects.

As well as helping to meet the carbon neutrality target of councils, this program is realising complimentary benefits of achieving regional natural resource management outcomes, including improved water quality, soil health and habitat connectivity, as well as adapting to climate change.

COUNCIL SURVEY: COMMUNITY EMISSIONS

Community-wide emissions arise from residential, commercial and industrial stationary energy consumption and transport, waste treatment, agriculture (including livestock and fertilisers), land use change and industrial processes and product use.

....

Councils can drive emissions reductions through local leadership, reducing corporate emissions, and local understanding of the community and established networks. Councils' existing services, ranging from planning and capital improvements to community development support, can be utilised to motivate and facilitate community climate action.

Councils alone cannot ensure community-wide emissions reduction targets are achieved. However, local governments can set an example through the setting of ambitious targets and action for their corporate emissions. They can also use their trusted position in the community to educate, facilitate, and support the local community to take positive steps towards climate action.

Although councils can regulate and make decisions regarding their own operations and assets and set community-wide targets and action plans, the responsibility for

achieving a net zero target rests on the collective efforts of residents, businesses, industry, and the actions of the state and federal governments. Accomplishing emissions reductions at a significant scale will require contributions from various stakeholders and broader societal and structural changes beyond the council's direct control.

Committing to a target is helpful to enable all stakeholders to efficiently plan, resource and deliver a just and timely transition. Local governments go a long way to enabling both existing state and national emissions targets, with results from this survey, extrapolated nationally, indicating that councils can contribute 29% of Australia's NDC by 2035.

Setting community-wide targets provides social licence and expectation for residents, business and industry to set their own targets and drive the required investments and reap local benefits.

The national sectors plans require everyone in the community to play their part. Local governments are well positioned to see that the plans are socially inclusive, equitable and appropriately managed to ensure that the benefits are shared by all and costs are not unduly borne by the vulnerable and those least able to afford them.

Councils are best placed to understand the vulnerabilities of their communities and how to implement effective and supportive policies that are also responsive to our changing climate.

SURVEY RESULTS

Emissions profiles

Snapshot Climate has become the go to resource for most councils' community emissions profile, primarily as it is gold standard emissions accounting, and is free and accessible. Staff have used it for their council for a range of reasons outlined in Figure 33, with 78% saying it is very or fairly useful for decision-making and communication.

Some (30%) used an alternative profile to Snapshot Climate, prepared themselves or by a consultant. These are primarily NSW councils with access to alternative data sources, such as the NSW SEED portal.

SNAPSHOT CLIMATE

Snapshot Climate helps councils and communities understand and track community emissions and the most effective strategies to reduce them.

Each Snapshot profile gives a breakdown of emissions by sector and sub-sector, including:

- stationary energy (electricity and gas)
- transport
- agriculture and land use
- waste
- fugitive emissions and Industrial Processes and Product Use (IPPU).

Snapshot is fully GPC compliant and can be used for reporting to international platforms like CDP and the Global Covenant of Mayors for Climate and Energy. It is available for free for every municipality, electorate, and state across the country and updated annually.

"
Snapshot gets straight to the point and visually provides a useful, easy-to-understand overview of where we can make the most impactful emissions reductions and support our whole community to become transition leaders.
"
Survey respondent

Example Snapshot profile

TARGETS

Many (37%) of councils said they have a target to reduce community-wide emissions, and an additional 31% are investigating one or intend to have one in the next 12 months, while 28% do not intend to set a community-wide emissions reduction target.

Most community targets are defined by net zero emissions (85%), with a smaller proportion looking at a percentage reduction (18%) or science-derived target (8%). Few councils have specific sector based targets.

Most councils are not so confident (33%), or not at all confident (46%) of meeting their community-wide emissions reduction targets, while 18% are somewhat confident. The primary barrier is that the council is not responsible for the majority of emissions, with accurate data and lack of knowledge on targets and high level support or councillor buy-in also concerns (Figure 34).

Figure 33 Have you used Snapshot at your council? Please select all that apply. (%)

- 92 — Used internally to get an understanding of our community emissions profile
- 62 — Used in council reports and documents
- 47 — Used as a communications tool with the community
- 39 — As a climate action-planning tool to understand where to best target action
- 23 — Used in workshops or webinars
- 21 — Used to help set emissions reduction or net zero targets
- 18 — Used on our website
- 9 — Other
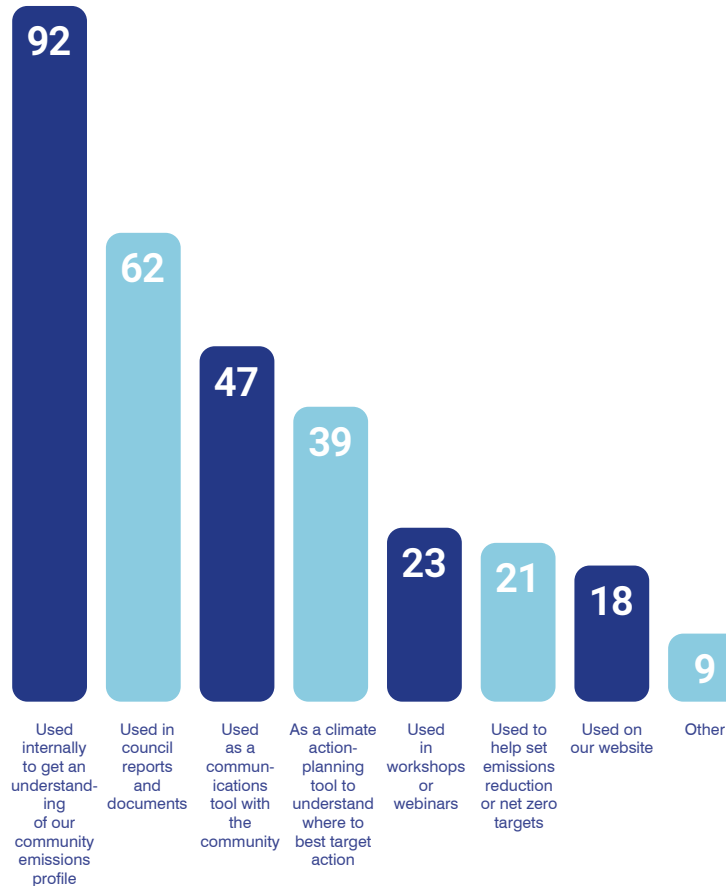
Figure 34 In general, what are some of the key barriers you've found in setting community-wide greenhouse gas emissions targets? (%)

Council is not responsible for the majority of emissions

71

Accurate data

42

Inability to reach potential targets

38

15

5

Councillor buy-in

No barriers

Lack of knowledge/ understanding of targets

26

16

Other

15

High-level support
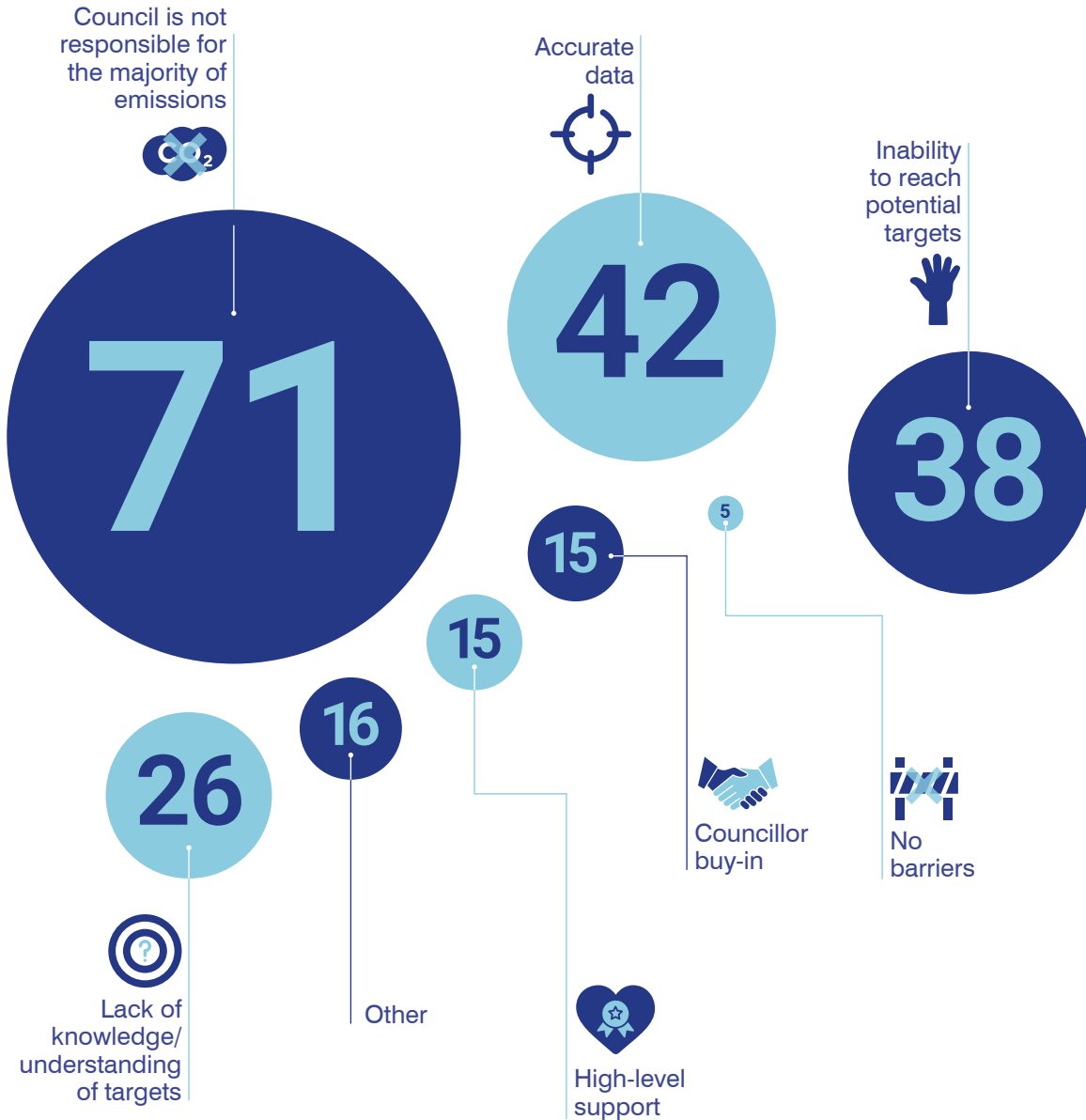
" There are so many factors that are outside the control of local government and this is a low socio-economic area so purchasing electric vehicles, green energy and high quality housing is unattainable for many. We also don't have access to public transport with many people living a long way from services. "

Survey respondent

> **"**
> **We are focused on our corporate emissions presently and finding it hard to have capacity for anything more**
> **"**
>
> Survey respondent

> **"**
> **Council views climate through a community lens and our lack of targets and climate 'must haves' that are used to indicate maturity in climate planning does not mean that Council is not in the game.**
> **"**
>
> Survey respondent

CARBON BUDGETS AND SCIENCE DERIVED TARGETS

Carbon budgets refer to the total quantity of greenhouse gases that can be emitted whilst keeping global warming below a specified target, most commonly 1.5°C or 2°C.

Ironbark has developed a tool to show carbon budgets and targets, based on work by Australia's Climate Change Authority and the Science Based Targets initiative, to provide a clear link between the magnitude of emissions reduction required and the global warming goal. This resource can be used to inform and support local government decision-making by ensuring the timing and trajectory of emissions reduction plans and net zero targets are commensurate with the climate problem. A science-derived target is one that takes into account the carbon budget when determining the timeframe of a net zero emissions target. You can access your local Carbon Budget here.

ACTIONS, STRATEGIES AND PLANS

Climate emergency declarations

Making a climate emergency declaration has enabled councils to engage with the community, caused senior managers to take climate change more seriously and helped prioritise resources, partnerships and community initiatives and targets (Figure 35).

56%
of responding councils have declared or acknowledged a climate emergency, and a further

7%
are considering making one, while

34%
do not intend to.

Climate Emergency Australia

Climate Emergency Australia is a network of Australian councils that have declared a climate emergency. More than one hundred councils around Australia have organised around the climate emergency as have one state and one territory.

Together, we represent more than 11.4 million Australians calling for a rapid shift to a more resilient, zero-carbon society. Climate Emergency Australia advocates on behalf of our members and builds the capacity of the Australian local government sector to govern in a climate emergency.

Many responding councils (64%) have or intend to have, strategies, implementation plans or policies in place to reduce emissions across their communities, the majority across waste, energy and transport (Figure 36).

Figure 35 How has declaring a climate emergency changed the way your council is responding to climate change? Please select all that apply. (%)

Value	Category
53	Our Executive Team and CEO have taken climate change more seriously
52	We've engaged with our community about the climate emergency and our plans to address it
42	We are building partnerships and participating in advocacy around the climate emergency
42	It's helped us prioritise resources for climate action
40	We're funding community initiatives to address the climate emergency
37	Increased emissions reduction targets
33	We've engaged our staff in what our climate emergency declaration means for their role and/or provided training
30	It's helped make climate change a consideration for all parts of council operations
30	Our budgeting and resourcing for climate action has increased
28	Our budgeting and resourcing for climate action is more secure
22	Brought forward the emissions reduction target year (e.g. net zero by 2030 instead of 2050)
18	It hasn't changed anything yet
12	Other
5	We have an internal and/or external climate emergency mobilisation plan

Figure 36 For each of the following community emissions sources, which areas have (or are intended to have) effective strategies for emissions reductions? Please tick all that apply. (%)

Waste
71

Stationary energy
67

Transport
65

Agricultural, forestry and other land use
22

Industrial processes and product use
21

Other
10

Fugitive emissions
8

I don't know
8

None
8
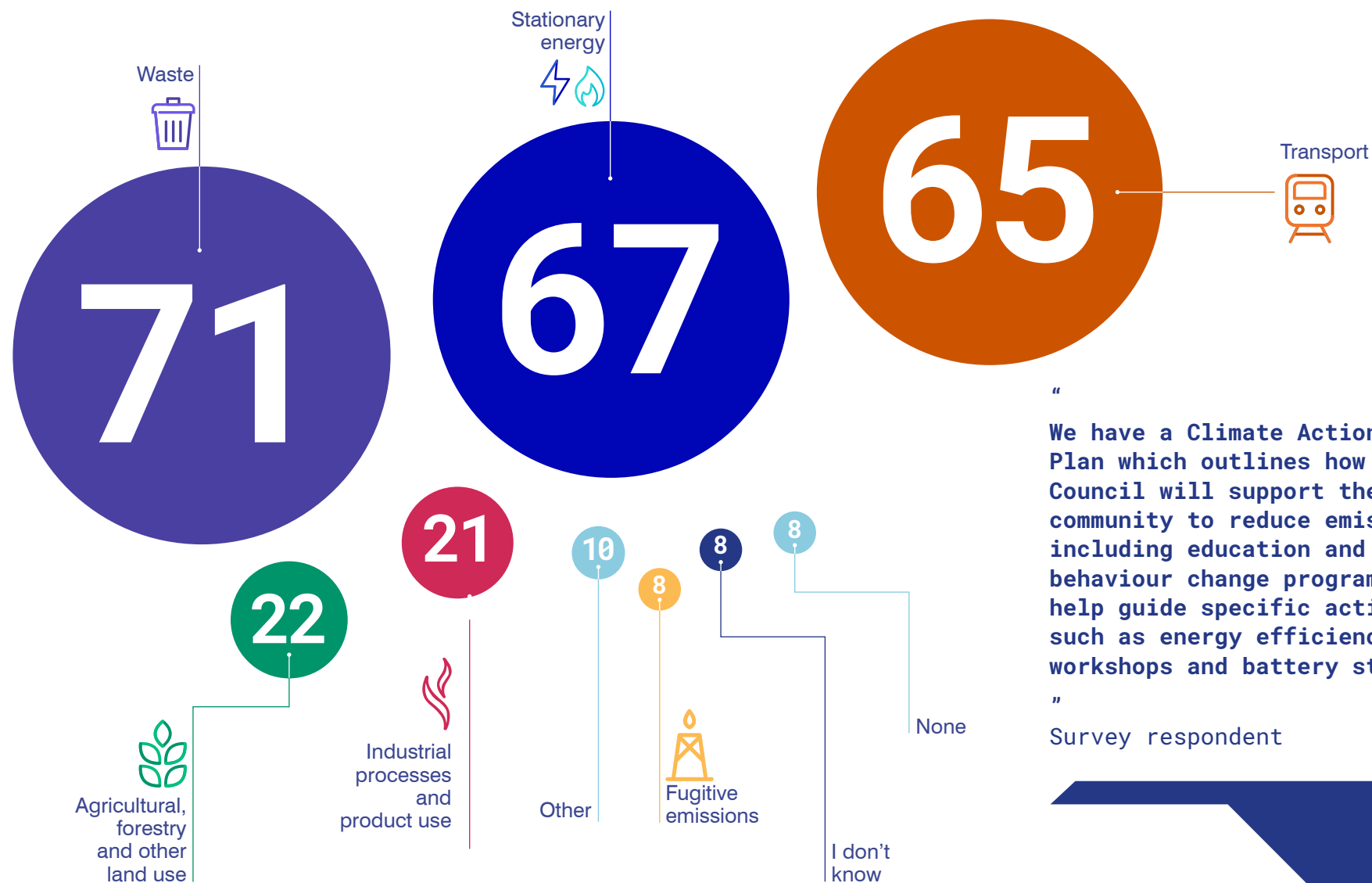
"
We have a Climate Action Plan which outlines how Council will support the community to reduce emissions, including education and behaviour change programs to help guide specific actions, such as energy efficiency workshops and battery storage.
"

Survey respondent

An increasing number 28%) of councils are identifying opportunities for implementing carbon drawdown projects, however, most councils (77%) do not have any drawdown plans in place. Councils are gaining in familiarity and interest with this topic and looking at opportunities.

Most councils

(64%)

do not have a transition plan in place for industries affected by a phase out of fossil fuels.

Key drivers for community-wide climate action are active and engaged communities, council leadership and assigned staff responsibilities.

Figure 37 What are the key drivers for climate action to reduce community greenhouse gas emissions at your council? (%)

65	Active and engaged communities
56	Mayor/ councillor leadership
55	Assigned staff responsibilities
33	General manager/ senior management support
33	Regional coordination
32	Understanding of cost/ benefits of actions
28	Duty of care and liability
27	Policy/ legislation
21	External funding
10	Avoiding future unbudgeted costs
10	Other
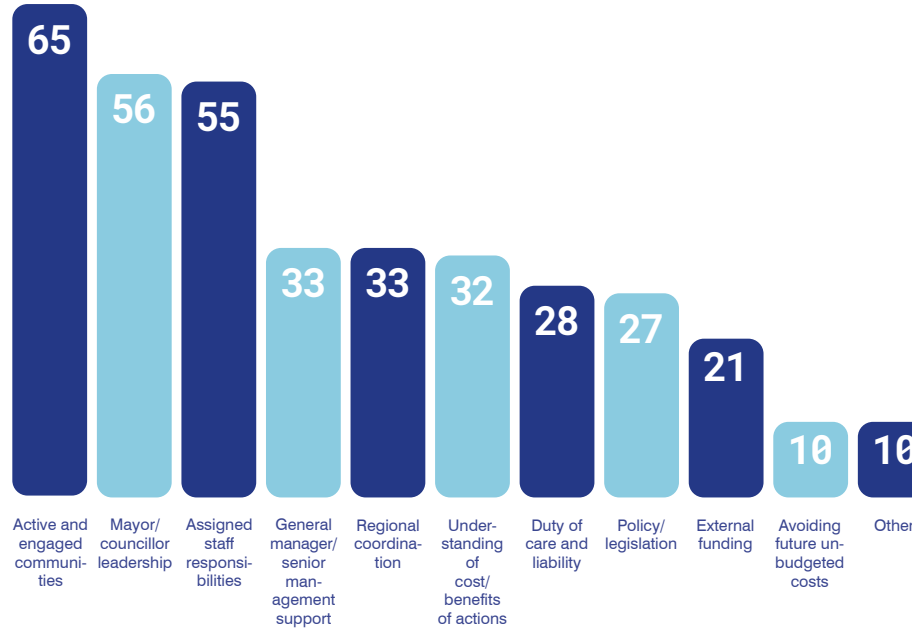
Key actions implemented for residents include education on energy efficiency, support for household electrification and community batteries, facilitation of solar PV or battery bulk buys and support for vulnerable communities.

Figure 38 Have you implemented any of the following actions that councils can undertake in the broader community to reduce emissions in the residential sector? (%)

Action	%
Educate on energy efficiency	82
Support household electrification	39
Provide support for community batteries	34
Facilitate solar PV or battery bulk buys	33
Support vulnerable communities	24
Identify preferred suppliers for energy efficiency retrofits/upgrades	21
Provide advice and advocacy or community-owned renewable energy	21
Provide support for virtual power plants/microgrids	13
Educate on sustainable procurement	12
Other	11
Provide solar rebates	9

Key actions implemented for commercial and industrial businesses include education of energy efficiency, facilitation of PPAs, Environmental Upgrade Agreements and installation of Solar PV.

Figure 39 Have you implemented any of the following actions that councils can undertake in the broader community to reduce emissions in the commercial/industrial sector? (%)

COMMERCIAL/INDUSTRIAL

Action	%
Educate on energy efficiency	72
Facilitate Power Purchase Agreements	31
Facilitate Environmental Upgrade Agreements (EUAs)	28
Facilitate solar PV installations	27
Other	21
Provide training, skill building and industry briefings	18
Educate on sustainable procurement	14
Identify preferred suppliers for energy efficiency retrofits/upgrades	14
Facilitate building optimisation	13
Provide solar rebates	11
Provide support for virtual power plants/microgrids	11

Transport emissions have been approached by undertaking actions such as building bike paths, installing EV chargers, and public and active transport advocacy.

Figure 40 Have you implemented any of the following actions that councils can undertake in the broader community to reduce emissions in the transport sector? (%)

TRANSPORT

Action	%
Build bike paths	81
Install EV charging infrastructure	64
Facilitate EV charging infrastructure	58
Undertake advocacy around public transport	50
Arrange Ride to Work/School	31
Implement programs to encourage or facilitate adoption of e-Bikes or e-Scooters	21
Facilitate car parking for car sharing schemes	17
Implement programs to increase adoption of EVs	16
Implement requirements through the planning process to require EV charging	15

Key actions in the waste sector include education on waste reduction, FOGO diversion, resource sharing, landfill gas capture and flaring or cogeneration and waste to energy services.

Figure 41 Have you implemented any of the following actions that councils can undertake in the broader community to reduce emissions in the waste sector? (%)

WASTE

Action	%
Educate on waste reduction	83
Undertake food organic waste diversion	70
Facilitate resource sharing/circular economy	53
Implement programs targeting business to decrease food waste or increase FOGO collection	36
Implement landfill gas capture and flaring	31
Participate in or implement a waste to energy service	17
Implement cogeneration on landfill gas capture	17

Other actions implemented include urban forest or biodiversity projects, advocacy and community engagement, funding of regional groups of councils, divestment and fossil ad bans.

Figure 42 Have you implemented any of the other following actions that councils can undertake to reduce emissions across the community? (%)

Value	Action
71	Create urban forest or greening strategies
69	Advocate to state governments
69	Fund biodiversity projects
60	Circulate newsletters and social communication
57	Hold community climate events
52	Advocate to federal government
52	Fund greenhouse alliances or regional groups of councils
43	Add sustainability criteria into planning processes
19	Divest council money from the fossil fuel industry
16	Advocate to industry
11	Supporting agricultural emissions reduction
10	Prevent ads for coal, oil and gas on council land and events

Implementing actions to reduce community emissions went reasonably well for most councils (48%), while other priorities or resource constraints hindered progress for many (45%). Most councils (74%) do not have strategies in place to monitor and evaluate community-wide actions, primarily due to resourcing constraints.

"
Many local governments are spending an extreme amount of money on arranging their own, individual flyovers and consultant written reports for something that is relevant to all local governments.
"
Survey respondent

Many councils are interested in working to increase tree canopy cover

77%

predominantly using data from local

81%

or state governments

47%

The need for consistency in data across LGAs and challenges in obtaining accurate and up-to-date data were highlighted.

BUDGETS

The survey asked about the budget allocation towards reducing community emissions in 2022/23. A range of responses were provided, noting that the question was not related to staff time. Rather, it related to project planning, delivery, implementation, management; development of strategies, plans or business cases; communication or consultants.

Council budgets to reduce community emissions ranged from $0–$6.5 million, with around two thirds of the responding councils having no budget allocation. Resources available were used for a range of projects, including facilitating uptake of renewable energy generation in the community, sustainability incentive schemes, energy efficiency retrofits for low-income households, education, community composting, public EV chargers and urban greening.

Table 8 Council budget allocation to community-wide emissions.

	Max. budget	Median budget	% with $0 budget
Regional centre	$200k	$0	64%
Growth area – urban fringe	$340k	$0	72%
Rural	$450k	$0	68%
Capital city	$6.5m	$52.5k	35%
All councils	$6.5m	$0	60%

BARRIERS

Key barriers to reducing community-wide emissions are funding and internal resourcing, as well as legislation, policy and the complexity of knowing how to respond (Figure 43). Several respondents noted that case studies and guidelines would be useful in guiding councils to develop their own community emissions reduction projects.

"

We need government policy and legislation that is clear, not conflicting e.g. – 'be net zero – decarbonise as quickly as you can – there's a climate crisis' at the same time as 'build cheap homes as fast as you can – there's a housing crisis'.

"

Survey respondent

Figure 43 What do you see as the key barriers to reducing community-wide greenhouse gas emissions? Please select your top three barriers. (%)

Barrier	%
Funding	55
Internal resourcing (number of staff)	51
State legislation and policy	24
Complexity of the issue/knowing how to respond	23
Community support	19
Limited staff capability/technical expertise (skills)	19
Political support	17
Other	16
Money	16
Senior management support	13
Apathy	11
Time	7
Access to data	7
Executive support	5
Resources/guidelines to refer to	5
Climate change impacts i.e. heatwaves, drought, bushfire, flood	3

FIRST NATIONS

Indigenous peoples have played a critical role in climate action in Australia, as climate change continues to threaten their ongoing connection to Country and erode their cultural heritage. Indigenous peoples also have huge capacity to make Australia more resilient to the climate crisis, drawing from an extensive repository of cultural knowledge.

There is great scope for local governments to learn from First Nations peoples, being the holders of deep-time knowledge of the land and water, and managing the land through cultural burning.

First Nations peoples are disproportionately impacted by flooding, bushfires and other disasters. Collaboration between local governments in Australia and First Nations communities on climate change is essential to address the unique challenges faced by Indigenous peoples and find sustainable solutions that respect Indigenous knowledge and rights. Recognising the deep connection between Indigenous peoples and their land, local governments have the opportunity to foster resilience in Indigenous communities.

Local governments can initiate dialogue and consultation processes with First Nations leaders and representatives to understand their perspectives, priorities, and traditional knowledge related to climate change. By acknowledging and respecting Indigenous sovereignty and self-determination, local governments can build trust and establish long-term, mutually beneficial partnerships based on reciprocity and collaboration.

Forty-four percent of councils said they engage with First Nations communities in the creation of their climate policies, strategies and action plans.

Local governments can ensure that Indigenous perspectives and priorities are integrated into decision-making processes, climate action plans, adaptation strategies and land use policies, and that climate solutions are culturally appropriate and responsive to local contexts.

Local governments can support capacity-building initiatives and provide resources to empower First Nations communities to lead climate change initiatives on their traditional lands.

Figure 44 Does council involve Aboriginal and Torres Strait Islander peoples when creating climate policies, strategies and action plans? (%)

44 — Yes
34 — No
19 — I don't know
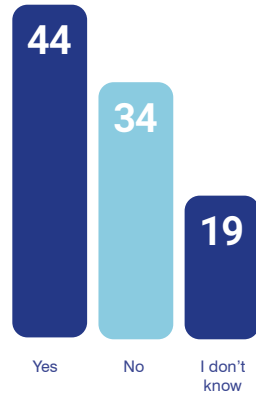
This may include funding for climate resilience projects, training programs on sustainable land management practices, and support for Indigenous-led research and monitoring efforts.

By leveraging Indigenous knowledge and practices alongside scientific and technical expertise, local governments can develop innovative and holistic approaches to climate change adaptation and mitigation that benefit both Indigenous and non-Indigenous communities.

"

We have worked and engaged with local Traditional Owners from the initial stages of our Climate Emergency Response. Our adopted Climate Emergency Response Plan includes their feedback and aligns with their Healthy Country Plans. We have a dedicated goal to work with Registered Aboriginal Parties and First Nations People on climate change and have several specific actions included.

"

Survey respondent

A number of councils and communities have taken leadership in this space, including:

Dja Dja Wurrung Aboriginal Clans Corporation (DJAARA)

Released a Climate Change Strategy and a Renewable Energy Strategy to provide a holistic approach to climate action, in contrast to colonial and Western approaches that see people, Country and climate as separate.

Darebin City Council

Darebin City Council has prioritised the perspectives and priorities of First Nations peoples in their climate work, integrating Indigenous knowledge and values into its climate policies and programs, including meaningful consultation with Traditional Owners, support for Indigenous-led initiatives, and amplifying Indigenous voices in climate advocacy.

A sustained relationship with Traditional Owners is the first Pillar in their Climate Emergency Plan. Collaboration with the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation on projects like restoring cultural landscapes and protecting sacred sites aims to foster reconciliation, social justice, and environmental stewardship while building more inclusive and resilient communities ready to confront the challenges of climate change.

Borough of Queenscliffe's Climate Emergency Response Plan 2021–2031

Has deeply embedded Wadawurrung values and aspirations for the area of Queenscliffe on Wadawurrung Country. Actions in the plan sit under eight pillars, the first of which is *Wadawurrung Country, Cultural Heritage and Values*. Wadawurrung Traditional Owners Aboriginal Corporation also released Paleert Tjaara Dja 'Let's make country good together' 2020-2030 Wadawurrung Country Plan. This identified various climate threats to Wadawurrung values and Wadawurrung Country, including sea level rise, rising sea temperatures, bushfires and drought, as well as other climate-related threats like water extraction and inappropriate location of wind farms.

Some actions include Songtimes and Wadawurrung Cultural Awareness training for staff and the community, incorporating the Wadawurrung Country Plan into Council policies and strategies, and supporting Wadawurrung traditional owners to assess and protect priority cultural places from climate impacts. Council have committed to continuing a close partnership with Wadawurrung Traditional Owners throughout the life of the Plan.

First Nations Clean Energy Network

Best Practice Principles for Clean Energy Projects are designed for the clean energy industry, government and communities, to ensure projects provide economic and social benefits, mutual respect, clear communication, cultural and environmental considerations, landcare, business employment opportunities and free, prior and informed consent (FPIC).

These Principles have been framed to help First Nations communities to achieve those goals and more. They should be followed by clean energy companies themselves and the governments that regulate projects.

Councils can support Indigenous-led initiatives in addressing climate change and promoting cultural resilience. Given council borders rarely align with Indigenous country or language groups, regional partnerships to coordinate relationships and requests for input can be helpful.

By respecting Indigenous knowledge and fostering meaningful partnerships, local governments can develop more effective and sustainable climate policies that benefit both Indigenous communities and the broader society.

OPPORTUNITIES AND RECOMMENDATIONS

Councils hold positions of leadership and trust in their communities, offering them unique opportunities to engage, influence and advocate on climate change. Action is needed at scale, meaning involvement across industrial, commercial and residential sectors, and with diverse groups.

Councils can leverage established networks, local understanding and their existing services to ensure emissions are reducing across the community.

Councils have been seeking to accelerate community-wide emissions reduction through various plans and strategies. The activities included within these strategies focus on key sources of emissions including:

- Residential, commercial and industrial stationary energy consumption e.g. electricity and gas usage in homes, offices, factories and warehouses.
- Transport e.g. cars, buses, air and rail.
- Community waste – residential, industrial, commercial and construction and demolition e.g. kerbside collection, public bins, hard waste.
- Agriculture e.g. livestock and fertilisers.
- Industrial processes and product use e.g. manufacturing.
- Fugitive gas e.g. refrigerant usage from buildings and vehicles
- Land use e.g. deforestation, reforestation, afforestation.
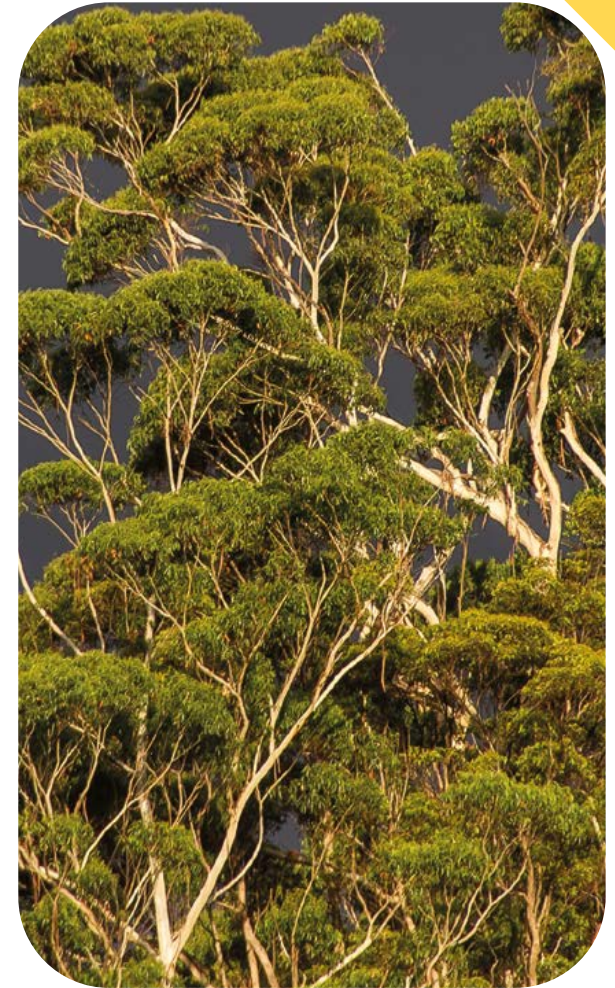
Monash City Council

Ironbark worked with Monash City Council to map the impact of commitments made by the top 29 emitters within their municipality and assess how they contribute to the Council reaching science-derived emissions mitigation targets. This analysis identified the major role that key emitters can play in reaching emissions reductions across the municipality, and the capacity to hit mitigation targets. Figure 45 illustrates the potential benefits of transparently incorporating the efforts of the private sector into municipal planning for emissions mitigation.

Figure 45 Emission reduction potential of engaging top emitters in the municipality of Monash.
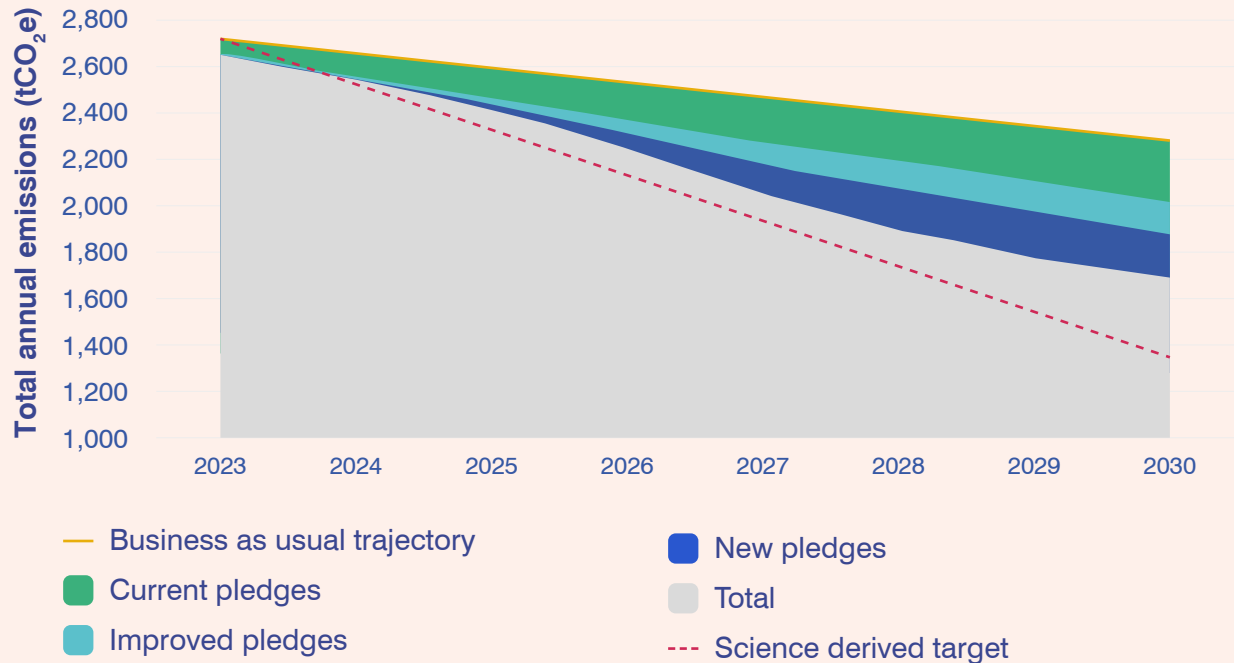
15 of 29

key stakeholders within the council had publicly established targets, which when overlaid on the business as usual trajectory for the municipality reached

28%

of the required reduction for the entire municipality. Identifying where businesses could establish new targets, or improve upon existing targets, found a further

36%

reduction achievable, resulting in almost two thirds of the required municipal reduction being achievable through direct engagement with these top emitters.

Modelled intervention programs for local government indicate that a multisector, well resourced program can achieve 5–7% reduction in emissions across the community. Some leading examples of these actions include assisting solar PV adoption in lagging sectors, facilitating community access to PPAs, increasing active transport and EV and active transport infrastructure support.

By engaging with key emitters across their communities, councils could leverage even further action. Engagement with key stakeholders to adopt and pursue ambitious targets can further reduce emissions by 6–10% across the community.

Collectively, intervention program and community engagement modelling suggests that councils can support community-wide emissions reduction pathways upwards of 15% by 2035 above business-as-usual projections. This puts them in a position to affect substantive change and to play a key role in national zero emissions plans. With support of a systematic, state or federally driven program councils can achieve significant emissions reduction across their communities.

Snapshot Pro

Snapshot Pro helps drive engagement with the business community and facilitate more coordinated action on climate change. Snapshot Pro gives councils the tools to track individual emitters across their community and understand how these stakeholders aggregate to form the emissions from the community as a whole.

They can build approaches for targeting commercial and industrial entities of all sizes, while exploring opportunities for bringing in community groups and other community-focused initiatives. Snapshot Pro can also be used to develop engagement strategies with local industry and businesses, while leveraging councils' influence to support industrial, commercial and subsector strategies and expectations.

Figure 46 Example Snapshot Pro profile showing breakdown of residential, commercial and industrial emissions, and allocation to local organisations.

- Residential
- Commercial
- Industrial
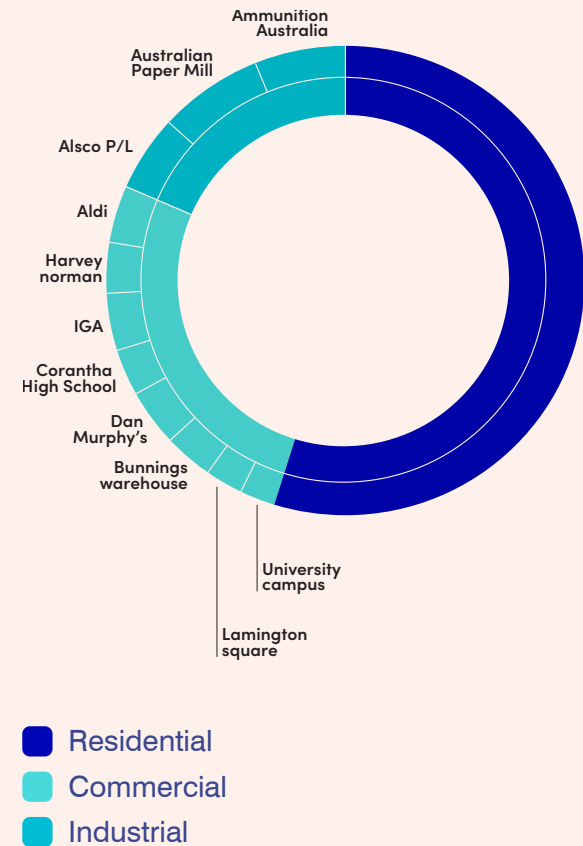
Community action plans

In many jurisdictions, local governments are being called upon to support their communities in decarbonisation activities.

"

NSW councils play a key role in supporting decarbonisation as local leaders and through their connection to local communities. By reducing emissions, local councils can help increase the resilience of their communities and act as a catalyst for New South Wales to meet its net zero emissions objective.

"

2022 NSW Net Zero Plan Implementation Update

Community action plans (including climate emergency action plans) have been created by many councils across Australia, building examples of strategy and action plan development to best match the capabilities and resources of local governments. A net zero community emissions strategy differs from a council's corporate or operational net zero strategy, which is focused only on emissions from council assets and operations.

Wingecarribee Community Emissions Action Plan

Council has adopted a Community Emissions Action Plan to support the community in taking meaningful action to reduce emissions and respond to the climate emergency.

The Plan is intended to complement the Environment and Climate Change Strategy and corporate Emissions Reduction Plan. It was a key commitment made by Council as part of its climate emergency declaration.
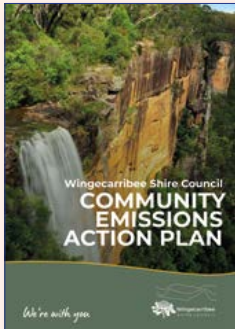
Rural Councils Victoria's Climate Change Toolkit helps councils understand their minimum climate change responsibilities for adaptation and corporate and community emissions plans.
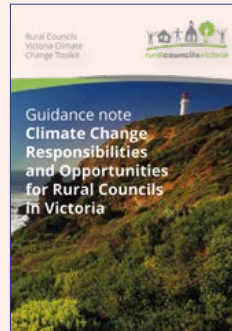
Net Zero Community Emissions Guide is targeted at NSW councils but is relevant for any council considering a community emissions action plan.
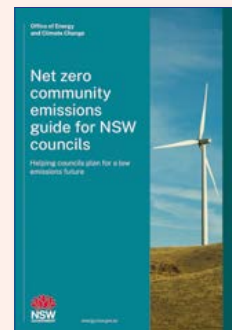
Local governments can:
- **Set a community-wide emissions reduction target in line with Science Derived Targets.**
- **Develop a community-wide action plan to support and facilitate local emissions reduction.**
- **Advocate for federal government to adopt targets aligned with the latest science and sector carbon budgets.**
- **Provide information on Australian Sustainability Reporting Standard requirements to suppliers and local businesses.**
- **Advocate for actions in sectors beyond councils' sphere of influence.**

The following pages provide an overview of effective activities local governments can implement, for each sector, and how state and federal governments can support them to minimise community-wide emissions.

STATIONARY ENERGY

Energy accounted for [49% of Australia's emissions in 2021/22](#), with around three quarters of these emissions coming from electricity and the remaining from gas. Industry accounted for more than half of all energy emissions (Figure 46).

Emissions in the electricity sector are rapidly reducing as a result of the expansion of renewables, with a national target of 82% renewable electricity generation by 2030. This target aligns with the Australian Energy Market Operator's Integrated System Plan Step Change scenario which AEMO sees as most likely to occur. [Emissions from gas](#) are expected to decline more slowly, and by 2035 gas demand is forecast to reduce by only 20% from 2025 levels.

Councils can play a key role in facilitating community engagement in the clean energy transition. They can support regional development with lasting benefits for landholders, communities and First Nations peoples. Local governments can support residents and businesses to undertake energy efficiency actions, install solar and batteries, and transition away from gas. They can establish low emissions planning controls and support community uptake of large-scale renewables. They can work with key industry and commercial stakeholders in their community to increase targets, transparency and accountability and elevate local investment opportunities to state and federal policy makers.

Figure 47 National electricity and gas emissions for residential, commercial and industrial sectors 2021/22. Source: [Snapshot Climate](#). (%)

National electricity and gas emissions
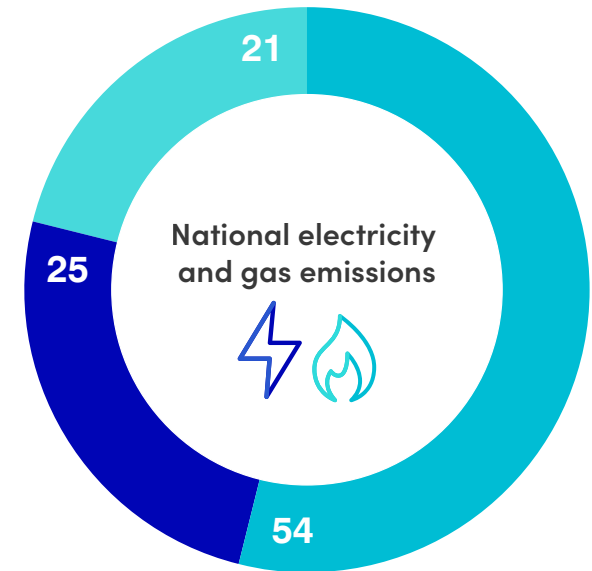
	Source %
Industrial	54%
Residential	25%
Commercial	21%

City of Mitcham Community Renewables Program

The City of Mitcham Community Renewables Program won the 2024 [SA Climate Leader Award](). They developed an innovative roadmap which shows how local governments can play a role in the global shift to a new energy system by mobilising residents, businesses, sporting clubs and associations to accelerate their uptake of renewable energy technologies.

Since 2022, the council has run three community bulk buys reaching over 4,000 residents and resulting in over 900 households signing up for solar panels and batteries to join a virtual power plant. The carbon emission reductions from the solar panel systems are 1,700 tCO$_2$e annually. Collectively, households have saved over $2 million on their energy bills, easing cost of living pressures. Once enough local battery power is installed, the Virtual Power Plant can provide a majority of power to everyone in the community – not just those that can go solar.

City of Mitcham is delivering a range of other innovative renewable energy programs, including procuring a

100%

renewable energy retail plan for Council's electricity energy consumption and partnering with SA Power Networks to run a trial for EV chargers on Stobie poles. South Australian councils the City of Charles Sturt, City of Campbelltown and City of Unley are set to replicate parts of the program for their own communities.

ACT Integrated Energy Plan

The ACT government's new Integrated Energy Plan lays out the pathway for Australia's first 100 per cent renewable, all electric city. ACT households with electrification loans have already saved an estimated $43 million on their energy bills. The plan provides support for electrifying community and public housing, lowest income and vulnerable households, and apartment residents, saving households around $735 a year. The plan includes a new Community Partnership Electrification Program that will support lowest income and vulnerable households to cover the up-front costs of energy efficiency upgrades. This will assist approximately 350 low-income households and support free advice and electrification planning for apartments and multi-unit buildings.

Energy actions

Table 9 Actions to reduce energy emissions across all levels of government.

🏛 Local government

- Advocate to state and federal governments for effective business and residential solar programs and financing, as well as a stable and sustainable electricity grid.
- Encourage businesses to source 100% of energy needs from renewable energy sources via PPAs.
- Collaborate with State government for community led submissions and proposals on new renewable energy infrastructure.
- Support community uptake of large-scale renewables and innovative methods for local distribution of renewable energy.
- Engage with local builders through new developments and building processes to maximise energy efficiency.
- Partner with a builders' association (such as HIA, Tafe, Sustainable Builders Association) to run training sessions.

- Investigate feasibility of a residential and/or commercial Virtual Power Plant program.
- Educate, support and provide incentives to businesses and residents on electrification, renewable energy and energy efficiency opportunities for existing and new buildings.
- Establish local planning controls for low-emission, all-electric, climate-resilient new builds and upgrades that exceed national and state requirements to set best practices and demonstrate achievable standards.
- Partner with the Federal Government to research gaps, challenges and ways to improve National Construction Code Section J Energy Efficiency compliance processes for new buildings and upgrades.
- Implement low emissions civic infrastructure initiatives.

State government

- Provide state level support for residential and business energy efficiency programs and financing.
- Provide residential/industry rebates and incentives to assist energy efficiency.
- Increase targeted grants for solar on residential and commercial properties.
- Increase renewable energy technologies on state government owned assets.
- Mandate smart metres for all new housing.
- Improve planning schemes for more sustainable buildings.
- Develop landlord tax incentives for energy efficiency measures, energy efficiency standards for rental properties, and mandatory disclosure of energy and water efficiency at point of sale or lease.
- Improve low emission, all-electric and climate resilient planning controls for new builds and major building upgrades (e.g. rooftop solar, no gas, light coloured rooftops).

- Upgrade civic infrastructure and planning zoning and controls to align with climate change risks (e.g. upgrade drainage systems to cope with flash flooding, prevent development in flood risk areas, develop defence mechanisms for estuarine inundation areas).
- Support low emissions civic infrastructure initiatives.

Federal government

- Fund a national residential and business energy advice and financing program.
- Collaborate with state governments to ensure a stable and sustainable electricity grid.
- Collaborate with energy distributors to release national data on an annual basis, in a consistent format, for community emissions reporting.
- Increase targeted grants for solar on residential and commercial properties
- Rapidly electrify Australia's homes and workplaces.
- Improve energy efficiency of residential and commercial buildings.

- Ensure new homes are all-electric and phase out gas from current buildings.
- Improve National Construction Code Section J energy efficiency standards and Greenhouse and Energy Minimum Standards for a nationally consistent approach to energy-efficient and climate-resilient new builds, upgrades, and appliances.
- Continue to improve and expand programs to monitor and improve building performance, such as NABERS and the Commercial Building Disclosure program.
- Lead research into gaps, challenges and ways to improve local government NCC Section J compliance processes.
- Conduct research with all governments to identify barriers to low-emissions, climate-resilient urban development.
- Investigate why local councils often lose in planning courts and develop legal frameworks, incentives, and guidelines based on the findings.
- Research and support low emissions civic infrastructure (roads, footpaths, etc) initiatives.

TRANSPORT

Transport accounted for <u>18% of Australia's emissions in 2021/22</u>. The transport sector is difficult to decarbonise and will need strategies and targets set for each mode of transport to track progress.

All levels of government will need to collaborate and invest more in public, shared and active transport infrastructure as well as in freight, EV's and support for regional and rural communities and vulnerable users.

Local governments are responsible for

77%

of the national road network. Local, state and national transport planning needs to integrate to enable appropriate local EV charging, engagement and resourcing.

The shift to active transport will provide social, health and environmental co-benefits and will save users money and time. New transport modes like electric bikes and scooters can provide fast and efficient transport, as long as infrastructure and legislation to support the safety of all users is developed.

Connect Melbourne's North

Melbourne's north is home to 20% of the population of Greater Melbourne. It is one of the fastest growing regions, with a population of 1.5 million forecast by 2036.

Transport is a major source of greenhouse gas emissions and the transition to sustainable transport modes, including walking, cycling, buses and EVs, provides a significant opportunity to decarbonise transport across the region and improve liveability.

The Community Electric Vehicle Transition Plan and associated campaign is an evidence-based, detailed plan for supporting lower emissions transport options for the community, businesses and Councils. Developed collaboratively by the municipalities of Banyule, Darebin, Hume, Mitchell, Merri-bek, Nillumbik and Whittlesea, it presents a series of recommendations for all levels of government.

A key opportunity in the plan is that delivery of a comprehensive active transport network – including walking, cycling and micro mobility e-bikes and e-scooters – must play a part in creating a sustainable transport future.

Google Environmental Insights Explorer

Transport dashboard

The Google Environmental Insights Explorer team has collaborated with Australian councils to develop a transport dashboard to set, monitor and track targets around key transport-related activities and transport modes.

The dashboard is tailored to support the specific decisions and needs of staff involved in transport mode shift and EV adoption, and will enable tracking of policy interventions and effectiveness over time. Transport data from 2018/2023 is available, and comparison of cohort councils supports the sharing of learnings across council or state networks.

Figure 48 shows transport modes, demonstrating the difference of alternative transport distance travelled (bottom blue bar).

Figure 48 Transport modes from the Glen Eira and Mitchell local government areas. Source: Google EIE – Transport dashboard.
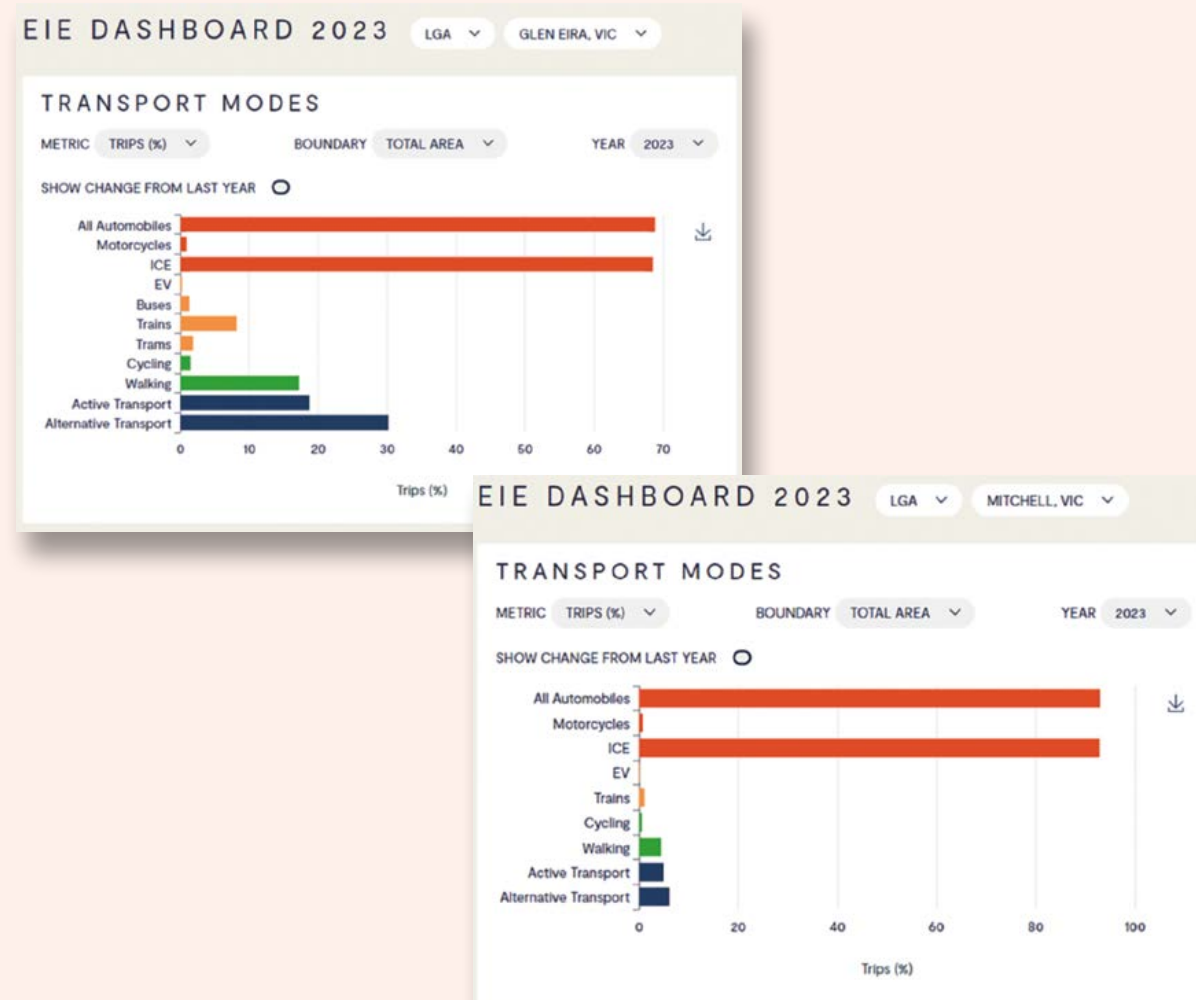
Transport actions

Table 10 Actions to reduce transport emissions across all levels of government.

Local government

- Create transport targets and plans.
- Prioritise active transport precincts and collaborate with local community on design.
- Increase shared transport and public transport infrastructure.
- Support mode shift in urban areas and better design in peri urban areas.
- Provide funding to fast track cycling and walking capital works plans and increase the number of protected bike lanes.
- Implement street calming measures (e.g., bollards, medians, refuge islands, trees, lower speeds).
- Mandate car share infrastructure in new developments.
- Promote e-bike programs.
- Educate community on shared and active transport options.

- Offer incentives like designated parking and discounted rates for EV users.
- Plan to gradually remove on-street parking for ICE vehicles (with protections for vulnerable users).
- Assist third parties in installing EV chargers and participate in regional EV charging network strategies.
- Revise local government planning controls to require all new developments to have active transport and electric vehicle infrastructure.
- Increase tree canopy to mitigate urban heat island effect, especially along pedestrian and cycling routes.
- Investigate secondhand EV bulk buys for the community.
- Increase public toilet access along key public and active transport routes.
- Advocate for freight transport to be transitioned from on-road trucks to rail and for the electrification of diesel freight trains.

State government

- Collaborate with local government to design electric bus networks.
- Make public transport planning and operation more accessible for local government and community to participate in.
- Improve public transport services and active transport infrastructure.
- Implement multi-tier governance strategy on EV charging infrastructure.
- Develop strategies around how key freight infrastructure and routes will support electrification.
- Boost public transport funding to 50% of transport budgets.
- Boost active transport funding to 20% of transport budgets.
- Power urban and regional train network from renewables.

- Reduce lanes available to cars, and reduce speed limits.
- Support regional and rural transport with a wide range of EVs to suit business and farming requirements.
- Invest in Bicycle Networks, more separated/protected cycling infrastructure, and bike lanes on strategic routes – connecting schools, shops and railway stations.
- Address gender and CALD barriers to accessing shared, public and active transport.
- Invest in walkable neighbourhoods and shopping precincts.
- Integrate bus and train timetables for more efficient travel.
- Collaborate with councils to increase tree canopy to mitigate urban heat island effect, especially along pedestrian and cycling routes.
- Identify priority areas for better cycle paths, safe road crossings, and missing pedestrian links.

Federal government

- Support shift from aviation to rail for domestic and commercial travel.
- Shift road freight to rail, with co-benefits in road safety and infrastructure.
- Provide incentives for the electrification of heavy vehicles.
- Provide rebates for low emission vehicle purchases.
- Help fund improved public transport services and active transport infrastructure.
- Provide dedicated funding for state and local governments to deliver public and active transport infrastructure.
- Set targets for avoid and shift measures for each transport mode.
- Build fast trains or High Speed rail networks to link regions and state capitals to reduce need for air travel.
- Develop nationally consistent light vehicle, e-bike and e-scooter road rules and infrastructure to protect all users
- Provide a national e-bike subsidy.

- Reduce dependency on and explore alternative solutions for aviation and shipping fuels.
- Limit aviation demand by restricting airport expansion and imposing a frequent flyer levy.
- Wind up business tax write offs for new petrol/diesel vehicles.
- Electrify passenger fleet, prioritising vehicles that travel most like taxis, rideshare vehicles and government fleets.

WASTE

The emissions from waste that are diverted into a landfill outside of the council boundary will fall into their community-wide emissions profile.

....

There is strong community drive and momentum to reduce waste and optimise resources. Federal and state governments are also working towards a circular economy, where materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. Legislation to enforce improved standards and procurement changes are starting to roll out. Councils can play an important role to educate, support and lead behaviour change across households and businesses in their community.

Hunter Circular

Hunter Circular is a cross-sector collaboration, led by the Hunter Joint Organisation on behalf of the councils in the region, with funding support by the NSW Government.

The Hunter and Central Coast Circular Economy Roadmap showcases successes to date and their ambition to become Australia's leading regional circular economy and to prioritise strategic opportunities of circular economy initiatives in the region. The Roadmap provides a comprehensive list of initiatives happening across the region, and methodology for adding, maintaining, and prioritising initiatives.

Love Food Hate Waste

Love Food Hate Waste is a program run by the NSW Environment Protection Authority to help minimise food waste across homes and businesses, as part of its commitment to achieve net zero emissions from organics waste in landfill and halve food waste sent to landfill by 2030. The NSW Government will require large food-wasting businesses to source separate food waste for recycling from 2025. A number of NSW councils are program partners. The Aged Care sector is one area of focus, with food waste costing the average aged care facility $1,000 per week. The program includes resources like the Your Business is Food Aged Care Toolkit on how to collect food waste data, design realistic solutions and empower staff to make effective changes.

Waste actions

Table 11 Actions to reduce waste emissions across all levels of government.

Local government

- Invest in recycling facilities and FOGO collection services for households and businesses.
- Implement curbside recycling programs and community composting initiatives.
- Enforce local regulations on waste separation and disposal.
- Conduct educational campaigns on waste reduction and recycling for residents and businesses.
- Collaborate with businesses, community organisations and neighbouring councils to share resources and expertise.
- Advocate for circular packaging standards and packaging stewardship.

State government

- Provide funding for regional waste management facilities and infrastructure upgrades.
- Develop statewide recycling schemes and promote composting in public spaces.
- Implement landfill levies and mandatory recycling requirements.
- Provide resources and support for waste education programs in schools and communities.

Federal government

- Support research and development of innovative waste management solutions and provide grants for infrastructure projects.
- Set national recycling targets and provide financial incentives for recycling initiatives.
- Develop national waste reduction policies and regulations, including extended producer responsibility schemes.
- Fund national public awareness campaigns and promote sustainable waste practices through media channels.
- Establish partnerships with international organisations and neighbouring countries to address global waste challenges and share best practices.

AGRICULTURE AND LAND USE

Emissions from the land use and agriculture sector come from a variety of sources, including livestock, land use and land use change (e.g. forested land being cleared for cropland or settlements) and fertiliser application.

....

In 2021/22, agriculture accounted for around 13% of Australia's national emissions, predominantly from sheep and beef cattle (82%), with a further 10% from dairy cattle.

In some municipalities, land use can be a net negative emissions source (i.e. reduce emissions rather than increase them, for example through afforestation); however, on a nationwide scale land use accounted for around +352 000 tCO_2e.

Improved land use management and land use change can support emissions reduction and also has the potential to deliver significant negative emissions, helping to offset emissions from other sectors. Indeed, vegetation projects dominate the Australian carbon offsets market, while savannah fire management is also frequently used to generate carbon offsets.

Local governments can play a role in minimising land use and agricultural emissions in their municipality. They can provide opportunities for drawdown via a range of actions, including urban forest strategies, resources for the community, local sequestration projects and advocacy with government and industry for targets and reporting standards.

Many of these actions have associated co-benefits, including reduction of heat impacts by enhancing tree canopy that improves the livability and value of urban areas while sequestering emissions. Local carbon offsets programs can also provide economic growth in regional communities.

Onkaparinga One Tree Per Child

The City of Onkaparinga in South Australia has partnered with One Tree Per Child, Green Adelaide, Arborgreen, and Trees For Life to encourage residents to plant trees or shrubs at their homes, businesses or schools. Part of the project involves a community tree give-away, with 1,000 trees distributed in 2024. Residents are then encouraged to share their planting on an interactive map. The council also shares information on the types of tree species that can be grown.

Urban Forest Collaboration – WALGA

Local governments can play a key role in protecting and establishing urban green space to improve health, biodiversity and reduce heat impacts across the community. The Perth and Peel Urban Greening Strategy provides strategic leadership and objectives to coordinate the delivery of greening initiatives across the WA State Government, local government and non-government organisations.

WALGA, along with the Western Australian Planning Commission and the Department of Planning, Lands and Heritage, released the Better Urban Forest Planning Guide to assist councils, developers and government agencies in their planning and policies around urban greening, tree retention and replacement. It includes information on planning, market based and regulatory tools, case studies that highlight 'best-practice' actions and how to access CSIRO's Urban Monitor data.

Land use and agriculture actions

Table 12 Actions to reduce agriculture and land use emissions across all levels of government.

Local government

- Develop and implement urban forestry plan to increase tree coverage.
- Adapt local planning policies to support afforestation and tree protection on public and private land.
- Enforce local planning schemes and bylaw regulations, combined with incentives, to increase tree canopy and restore and conserve private and public land using a climate resilient approach.
- Require nature strips to have at least one tree and ensure residents, builders and engineers are aware of this requirement.
- Enforce and strengthen controls to limit the removal of existing trees and vegetation, including a significant tree register.
- Develop relationships with local farming communities and representative groups to collaborate on emissions reduction activities and studies
- Facilitate effective local advocacy and actions – establish regional officer roles to liaise with stakeholders.

- Support community based solutions and research into low emission farming practices.
- Integrate revegetation and climate resilience into local planning schemes and development controls
- Optimise council resources across the built, agricultural and natural landscape through strategic planning, protection, revegetation and regeneration.
- Engage local communities, landholders and Indigenous groups to promote revegetation and climate resilience.
- Provide education and resources for sustainable land management, effective tree planting projects and suitable plants and weed control.
- Support local projects like community planting, habitat restoration and urban greening.
- Increase implementation of sustainable and regenerative land management practices for agricultural, domestic, and public lands, reserves and parks.
- Encourage regenerative farming practices e.g. perennial ground covers, rotational grazing, minimising soil disturbance and chemical inputs.

- Ensure selection of tree plantings in new residential developments provide good shade in summer and allow sunlight access in winter.
- Ensure consideration is given to tree placement to optimise urban design and minimise shading of solar panels
- Encourage farmers to reduce pesticides/herbicides and fertilisers.
- Support education and knowledge sharing within the community about benefits of soil health in agriculture.
- Support local carbon offset purchases and local carbon sequestration projects.

State government

- Expand support for low emissions agriculture, consider developing agriculture-specific climate roadmaps similar to the Queensland Government roadmap.
- Provide financial incentives to rehabilitate and conserve biodiversity and strengthen resilience to climate change.

- Strengthen land management, vegetation clearing and conservation laws and land use planning controls and zoning. E.g: Limit clear-felling on private land during development; legislate protection of green areas on private land; end old growth forest logging; tighten restrictions on clearing remnant vegetation.
- Conduct periodic surveys of vegetation cover across the state and changes in urban heat.
- Provide the necessary statutory guidance and planning policies to support local government efforts to maintain their urban tree canopy.
- End wood supply agreements and wind up native forest logging.
- Fund programs investigating commercially viable solutions for transitioning agriculture to lower-emissions practices.
- Enforce and strengthen controls to limit removal of existing trees and vegetation.
- Collaborate with local and federal governments to identify, protect and enhance carbon sinks on both public and private land.
- Support local agricultural players to know their emissions baseline and understand mandatory reporting requirements.

- Set targets in collaboration with Natural Resource Management, agricultural bodies and industries to monitor emissions and policy/program impact.

Federal government

- Support research on low emissions farming practices, manure management and fertiliser use.
- Increase funding to scale-up the production of methane-reducing feed supplements and other low emissions farming practices.
- Strengthen policies for environmental conservation and climate resilience.
- Increase funding for conservation programs like Landcare.
- Fund and share research on biodiversity, climate change impacts and land management.
- Strengthen laws to protect biodiversity, manage land use and reduce emissions.
- Partner with all government levels, NGOs, private sector, and Indigenous communities to enhance biodiversity and emissions reduction.

- Expand forest areas and increase the amount of stored carbon in Australia's forests.
- Create frameworks for carbon credits and offsets.
- Develop systems to monitor and report revegetation project progress (e.g. nationally consistent data to support urban forestry projects and systems).
- Reduce emissions from deforestation and expand forest and plantation areas.
- Provide a framework for local government to contribute to the Federal 30 by 30 target.
- Establish quantitative targets to drive ambition and support monitoring of progress against nature and climate commitments.
- Develop a robust local offset market that prioritises drawdown of greenhouse gas emissions and maximises co-benefits for First Nations and regional communities while supporting compliance schemes.
- Improve renewable energy and carbon offsets schemes, with voluntary renewable energy and carbon reduction efforts additional to Australia's NDCs.

MONITORING AND EVALUATION

The process of monitoring and evaluation is an important way for councils to assess success and improve outcomes to determine which projects can be replicated in other regions.

....

Results can be shared internally, within the sector and with the community to build further support for action, and allows councils to magnify the impact of successful projects or recalibrate and learn from projects that haven't worked out as intended.

Effective monitoring and evaluation programs allow councils to adjust their efforts to maximise impacts, as well as share learnings on implementation. The process provides accountability and the ability to demonstrate measurable results.

External engagement with other councils to share learnings further drives action in the sector, raising the bar for action and firmly establishing climate action as the norm for local government. Understanding what does and doesn't work, with real data, is incredibly useful to local governments across Australia.

SURVEY RESULTS

The majority of responding councils do not monitor or evaluate their emissions reduction actions or projects (Figure 49). Some councils have strategies in place to monitor and evaluate projects, but more often than not, councils do not have the resources to monitor and evaluate effectively.

Those who do carry out monitoring and evaluation tend to do so at the end of a project, and corporate projects are more likely to be monitored than community projects. Around a quarter of those who carry out monitoring and evaluation for corporate projects thought that it was adequate, (Figure 50). Several councils commented that their annual corporate inventory was the only monitoring they undertook, while others commented that resource constraints limited how much monitoring and evaluation they could do.

"
We are very resource constrained so we need to choose between doing and measuring.
"

Survey respondent

Figure 50 Overall, do you think council's monitoring and evaluation is adequate? (%)

	Corporate	Community
Yes, it's more than adequate	3	0
Yes, it does what we need for reporting	21	9
No, we could improve	51	56
No, we only use monitoring and evaluation for reporting	8	9
No, we'd prefer it if monitoring and evaluation was used for optimising project delivery	8	5
I don't know	8	15
Other	0	7

■ Corporate ■ Community

Figure 49 Does council have strategies in place to monitor and evaluate actions or projects to reduce greenhouse gas emissions? (%)

	Corporate	Community
Yes, we evaluate and monitor throughout a project	13	7
Yes, we evaluate at the end of a project	19	16
No	61	74
I don't know	7	4

■ Corporate ■ Community

"
One thing we have begun doing is undertaking post installation audits of rooftop solar PV installations. These have been great in making sure the Council is getting what was paid for and the solar PV is performing as expected.
"

Survey respondent

OPPORTUNITIES AND RECOMMENDATIONS

Corporate monitoring and evaluation

Emissions inventories are the first step for councils to develop effective monitoring programs. Having a good understanding of the council's emissions and how they are tracking over time provides a solid foundation for action and allows councils to identify and prioritise emissions sources to be addressed. Reporting on emissions over time will also allow the councils to achieve recognition for the emissions reduction activities they are undertaking.

Council reporting standards

Since 2022, the Australian Government has developed mandatory climate-related financial disclosure reporting requirements for large corporations and federal departments and agencies. The Australian Sustainability Reporting Standards (ASRS) are developed by the Australian Accounting Standards Board (AASB), which aligns with the International Financial Reporting Sustainability (IFRS) standards. These aim to harmonise climate related reporting in Australia.

Mandatory reporting may apply to all local governments in the near future, so many councils are preparing their reporting to align with the new standards to respond to requests from those required to undertake mandatory reporting. This has a large focus on Scope 3 emissions reporting, including value chain or supply chain emissions reporting, which has become an increasingly significant focus for local governments.

To underscore the need to prepare, the Australian Local Government Association (ALGA) National Convention passed a motion in early July 2024 calling on the Australian Government to work with ALGA and councils to identify minimum climate disclosure reporting standards that could apply to local government entities.

Information for local governments on emissions inventories with a particular focus on engagement with key suppliers to understand value chain risk outlines how supply chain reporting involves an iterative process of identifying key emitters, supporting suppliers and completing regular reporting.

As well as potentially becoming mandatory for councils in the near future, engaging with suppliers can improve council reporting and understanding of climate change risk.

This can also begin the work of supporting your community to prepare for a net zero emissions future in a constructive and useful way.

Scope 3 emissions

Scope 3 emissions are emissions that occur in the value chain of the council, both upstream (before the council acquires goods or services) and downstream (after the local government provides goods or services). These can be the largest share of a council's emissions, but are often under-reported due to the difficulty in obtaining data.

As discussed above, new mandatory reporting requirements for large organisations are expected to make reporting of Scope 3 emissions more common.

Councils can expand reporting of Scope 3 emissions, engage with key suppliers around emissions reduction and establish procurement policies to prioritise the purchase of sustainable products.

Notable sources of Scope 3 emissions include concrete and asphalt. These have large amounts of embedded emissions due to their resource intensive production requirements and are often a large source of Scope 3 emissions for councils investing in infrastructure capital works and maintenance.

There are many ways to reduce these emissions, such as using fly ash, rubber, glass and crushed concrete instead of virgin materials. Various manufacturers now produce lower carbon concrete and asphalt, while 'virtually zero emissions' steel is expected to come onto the market soon. Carbon neutral bricks are already available, and emissions can also be reduced by using recycled timber.

Looking to Scope 3 emissions sources can give councils effective tools for expanding emissions mitigation action beyond their immediate organisation. Councils can specify recycled/low emission materials and minimal hard surface designs for all civic infrastructure (roads, footbaths, car parks and hard surfaces) as part of their procurement policies.

State infrastructure guidelines can also be updated to allow for low emissions materials (i.e. VicRoads fly ash content) and the federal government can support hard surface redesign trials with funding and research.

Contractor fuel use can also be a significant emissions source, and one that councils can influence through engagement with suppliers and the introduction of emissions reduction requirements into key contracts.

Cairns Regional Council

A Low Carbon Procurement opportunities paper and business engagement assessed the potential for local governments to collectively reduce community and operational emissions (Scope 3) through a low carbon procurement strategy.

By aligning tender information requests and delivering education, with support from State or Federal government programs, buying power can encourage low carbon business practices in our value chain, and stimulate demand, to source low carbon goods and services for our operations.

We have worked with the FNQROC councils procurement working group, including Mareeba, Douglas and Tablelands councils and have held a workshop with LGAQ, Sunshine Coast, Brisbane, and Treasury and developed a LGAQ motion to make this an advocacy matter.

Community-wide monitoring and evaluation

There are many challenges for cities to effectively monitor the impacts of their community-wide programs. The duration of programs, their relative scale in the context of their communities, and the many confounding factors influencing emissions producing activities at a municipal scale, create an environment where establishing the impacts of mitigation and adaptation programs is problematic. Monitoring and evaluation activities for individual councils are often costly and complex and will typically only produce simple insights.

For effective monitoring and evaluation to take place, several factors are needed:

Duration of monitoring
Ideally, monitoring will have begun for some time before the desired program has been implemented, so that a baseline can be established.

Cohort mapping
Monitoring programs strongly benefit from having data collected from other locations outside of where the program is being implemented so as to control for confounding influences that occur during the monitoring period.

Standardisation of metrics
To extrapolate findings or undertake a meta-analysis across multiple initiatives to improve confidence in outcomes, standardised metrics (and classification of actions) is critical so that analysis can be done in an apples-for-apples type comparison.

To address these issues, a common monitoring and evaluation system would be highly desirable. Through a collaboration with the Global Covenant of Mayors for Climate and Energy and the Innovate4Cities research collective, Ironbark has developed an extensive database of city-led initiatives that would meet these factors.

A community-wide monitoring and evaluation program would best be coordinated at the state or federal level, where local governments can participate and track any interventions they are implementing, while also being able to learn from initiatives being implemented by other councils.

Monitoring and evaluation actions

Table 13 Actions to support monitoring and evaluation of climate programs.

Local government

- Improve monitoring and evaluation of climate projects and modify project delivery accordingly.
- Communicate results of monitoring and evaluation to the sector.
- Report on all Scope 1 and 2 emissions.
- Explore Scope 3 reporting for council's inventory and supply chain and how council procurement policies and operations can influence the community.
- Advocate for national reporting standards and resourcing to implement.
- Create a long term monitoring and evaluation strategy.
- Implement sector specific targets to monitor impact over time.
- Establish procurement policies to prioritise the purchase of sustainable, low-emission products and services to influence the market towards more sustainable options.

State government

- Provide systems to support councils to more efficiently and accurately gather Scope 3 emissions data.
- Provide common tools for the creation and update of corporate emissions inventories.
- Support standardised inventories for communities across states.
- Provide projection estimates for localities so that strategic development across communities can be done in a compatible manner.
- Implement sector and activity specific targets for change.

Federal government

- Review Climate Active processes and guidelines and provide accessible emissions factors for public use.
- Support standardised inventories for communities across the country.
- Identify minimum climate disclosure reporting standards that could apply to local government entities.
- Provide resourcing and nationally consistent training and systems for councils to monitor and report on corporate and supply chain emissions.
- Develop and introduce guidance and standards for local governments that align with the voluntary reporting requirements on climate-related financial disclosures around governance, strategy, risk management, targets and metrics to manage systemic risk and promote a sustainable financial system within local governments.
- Implement the updated ASSB climate reporting to require companies to begin to track and report Scope 3 emissions data.
- Develop regional approaches and support for councils without staff to drive action.

CLIMATE IMPACTS, RISK AND ADAPTATION

As climate change accelerates, the intensity and frequency of extreme events is also projected to increase, including heatwaves, flood, drought and storms.

....

Extreme events pose significant risks for human health, safety, and well-being, as well as economic stability and environmental sustainability. Rising sea levels put coastal habitats and infrastructure at risk, while changes to rainfall are impacting agriculture and could see some areas face severe water shortages in the future.

Community impacts can be both acute and long term, across a range of areas including water, food, health, social resilience and community development. The longer term and insidious issues are often a gap in risk and adaptation planning.

As Australia gets hotter, drier and experiences more extreme weather, the adaptive capacity of our communities, infrastructure, environment and economy will be put to the test. The urgency to address climate change impacts and risks and the need for adaptation is more pressing than ever. In some states, such as Victoria, councils are legally bound to address climate change, but all councils face direct risks across essential services, assets and operations. The Duty of Care principle, enshrined in state specific local government legislation like Local Government Acts, underscores the responsibility to address climate risks diligently.

Australian climate related costs are projected to skyrocket to $150 billion over the next decade and a staggering $1 trillion by 2050. The imperative for adaptation and resilience-building is undeniable. Councils have to grapple with long-term

physical impacts such as from coastal inundation, sea-level rise, and acute risks of heatwaves, bushfires and floods. Economic considerations, including policy shifts, technological advancements, and stakeholder preferences, further compound the challenge.

However, most councils are not well resourced to undertake climate change risk assessments or adaptation planning and implementation. There is limited training to develop and then integrate into council planning and strategic and service delivery levels. There is not currently a consistent approach used to develop climate risk assessments for councils and their communities.

The escalation of climate impacts heightens the obligations of due care and diligence for councils. Robust and transparent decision-making processes mitigate such risks. Rising insurance costs for council assets and insurance withdrawal from at-risk locations also present significant challenges.

The Australian Government's National Climate Adaptation and Risk Program, which includes Australia's first National Climate Risk Assessment and National Adaptation Plan, aims to build a framework for adaptation and address priority climate risks, noting that adequate resourcing will be required to enable action at local and regional scales. Regions that are at critical risk due to severe and cascading climate impacts compounded by economic disadvantage and low capacity to adapt should be prioritised. Some councils and regions have particularly low capacity to identify and assess climate risks, let alone manage or mitigate them, so state and federal collaboration and assistance is essential.

Transition risks associated with how councils manage and adapt to internal and external change is also a factor. Collaboration across councils is also imperative for capacity-building, information-sharing, and best practice dissemination. Effective climate risk, adaptation and resilience-building demand concerted efforts across all levels of government and collaboration among stakeholders to build a sustainable and resilient approach. A forward-thinking approach not only minimises risks but also unlocks opportunities for local councils and sets the scene for a viable pathway to mitigate increasing costs and liabilities.

Role of local government

Risk assessment and planning

Local governments should conduct climate risk assessments to identify climate change impacts and vulnerabilities in their communities. This should be based on vulnerability and exposure to hazards, including the sensitivity of populations and assets, as well as their adaptive capacity. This information can inform the development of climate adaptation plans and policies tailored to local needs and priorities. Risk assessments will ideally become increasingly comprehensive with each reassessment, occurring every few years, as new information becomes available on risk components (noting that risk is a combination of hazard, exposure and vulnerability). Likewise, regularly reviewed climate adaptation plans will ensure adaptation approaches continue to be relevant and effective as risks change and adaptive responses improve.

Infrastructure resilience

Local governments are responsible for maintaining and upgrading critical infrastructure, such as transportation networks, water supply systems, and buildings, to withstand climate impacts.

This includes retrofitting infrastructure to improve resilience, diversifying water sources, enhancing drainage systems, and incorporating green infrastructure solutions, such as permeable pavements and urban green spaces, to manage stormwater runoff and reduce flood risk.

Emergency management and response

Local governments play a central role in emergency management and response efforts during extreme weather events and natural disasters. This includes developing evacuation plans, establishing emergency shelters, coordinating with emergency services and community organisations and providing timely information and support to residents.

The Victorian Climate Resilience Councils (VCRC) community emergency risk assessment shows critical problems with how emergency management addresses climate change. Perhaps the most important problem is staffing – there are simply not enough officers, they are too thinly stretched and already facing significant emotional and physical burnout from managing existing emergencies.

Community engagement, capacity building and vulnerability

Many local governments are considering their duty of care to engage with community members, businesses, and other stakeholders to raise awareness about risks associated with climate impacts and adaptation strategies. Councils hit hardest tend to be the least resourced, least prepared and least funded to support sustainability or adaptation initiatives. Advocating for the most vulnerable communities should be a responsibility shared by all councils.

Collaboration and partnerships

Different levels of government and sections of the community will experience similar climate impacts (for example, various stakeholders dealing with the impacts of drought), but will have different perspectives, responsibilities and tool sets to respond to these impacts.

Collaboration and coordination with regional, state, and federal agencies, as well as with community organisations, Indigenous groups, and private sector

partners, is required to leverage resources, expertise and knowledge in addressing climate change adaptation and risk. By working together, local governments can develop more effective and integrated approaches to climate resilience that benefit all members of society.

SURVEY RESULTS

Climate impacts

Almost all council (94%) and community (82%) respondents stated that climate change has impacted their local community or council operations to date. Impacts of extreme heat on vulnerable populations and council outdoor workers were a common concern, and many communities had been impacted by extreme events such as flooding.

Most councils (59%) do not feel that they or their community is well prepared to respond to the impacts of climate change.

Figure 51 Do you feel your council or community is well prepared to respond to the impacts of climate change, such as heatwaves, increased fire risk, flooding or drought? (%)

56	26	18
No	Yes	Not sure

"
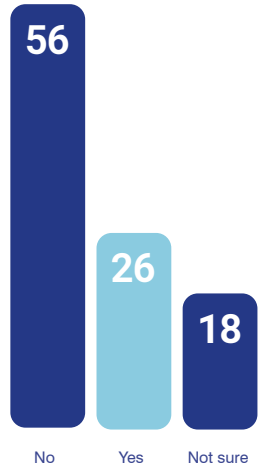
Our natural environment, community facilities, businesses, schools, everyone is feeling the impacts of climate change.

"

Survey respondent

ACTIONS, STRATEGIES AND PLANS

Many councils have undertaken a climate change risk assessment (58%), mostly in the past few years. The financial impacts of climate change on council assets and services are still only partially understood (Figure 52). Almost half of respondents do not think climate change has been incorporated into their long-term financial or asset management planning, with 42% stating that it has somewhat been incorporated.

Figure 52 Are climate change risks incorporated into long-term financial plans or asset management plans? (%)

47	42	8	3
No	Somewhat	Unsure	Yes
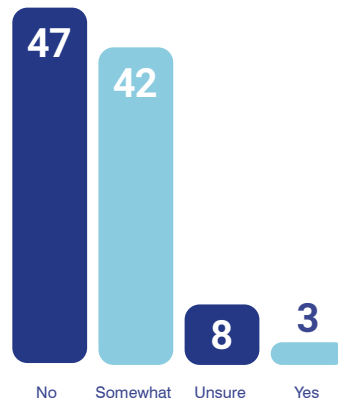
Figure 53 Are the financial impacts of climate change on council assets and services well understood? (%)

51	39	7	3
Somewhat	No	Yes	Unsure
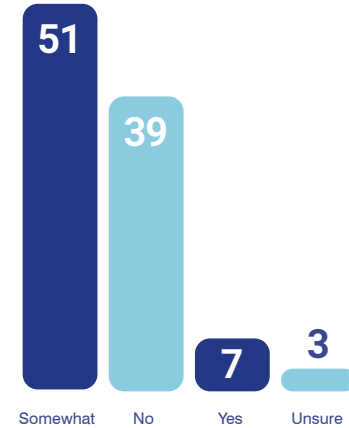
Many councils (72%) however, are implementing climate change adaptation initiatives, such as urban greening, water sensitive urban design, modelling to understand future climate, retrofitting buildings, coastal adaptation and nature based solutions, asset vulnerability assessments, water misters, setting up heat refuge centres and trialling lighter paint on road surfaces.

Figure 54 What barriers does your council face in implementing adaptation? (%)

Internal resourcing (number of staff)
70

Funding
67

Complexity/ knowing how to respond
53

Limited staff capability/ technical expertise (skills)
48

Senior management support
24

Political support
22

State legislation and policy
19

Community will
17

Apathy
13

Unclear high-level targets/ policies
12

Federal legislation and policy
10

Other
6
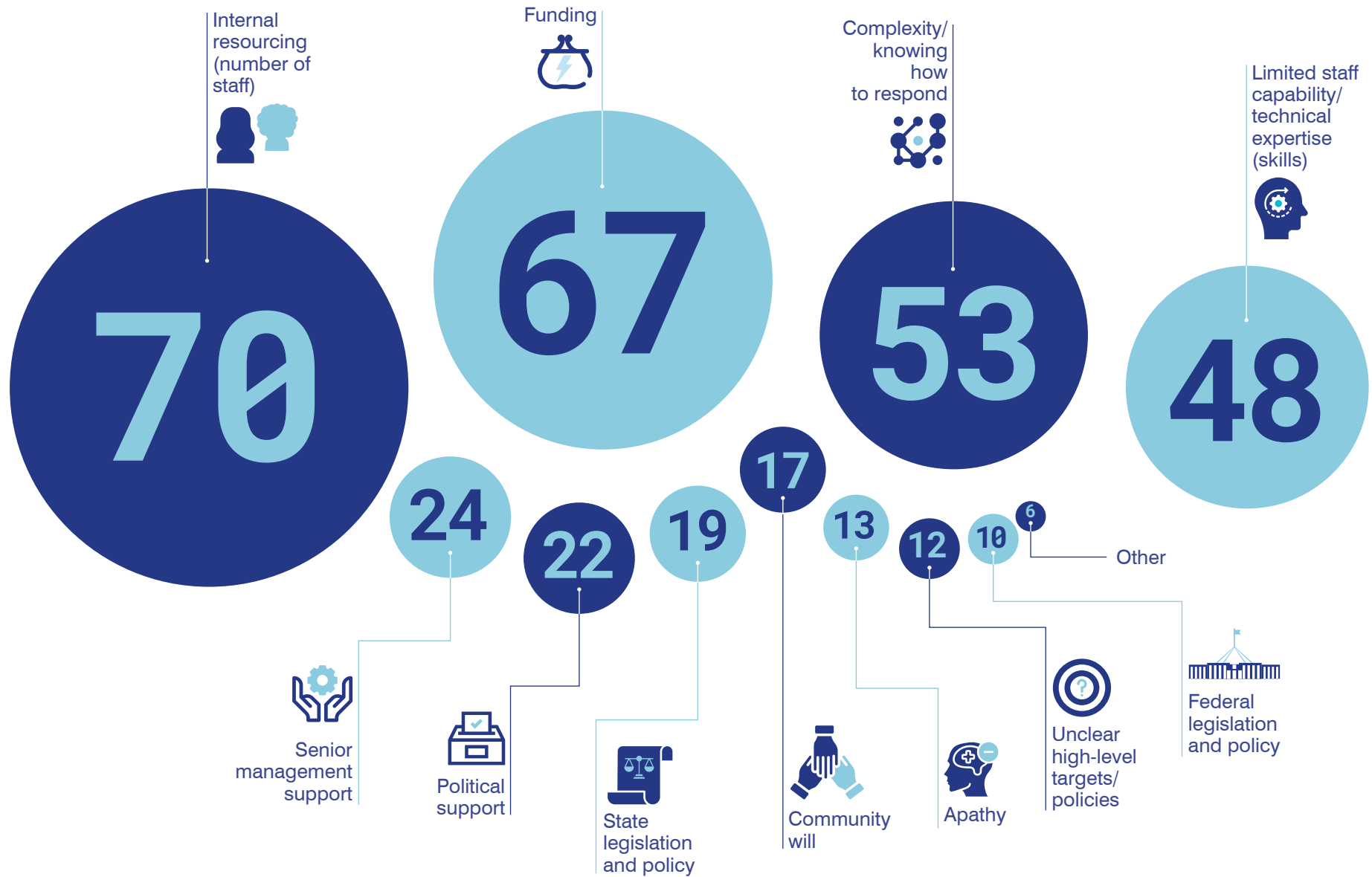
Some councils have (42%) or intend to have (37%) a climate change adaptation plan or strategy. Some of these are linked to state (11%), regional (7%), national (6%) or international (4%) processes, although 33% of respondents were not sure if there were any linkages.

Adaptation plans and strategies are often linked to climate mitigation plans (55%), while some councils prepare two discrete plans (29%).

BARRIERS

Lack of funding and internal resourcing were the biggest barriers to adaptation, with the complexity and limited capability and skill for staff also being key issues (Figure 54).

Funding was the primary requirement to overcome barriers, with resources and guidelines, access to expertise and training opportunities also identified as key support mechanisms (Figure 54).

Figure 55 What support do you feel would help you to overcome these barriers? (%)

Funding	Access to expertise	Resources/ guidelines to refer to	Training opportunities	Executive support	Time	Opport- unities to learn/ collaborate with other councils	Access to data	Other
80	51	51	44	40	40	40	31	4
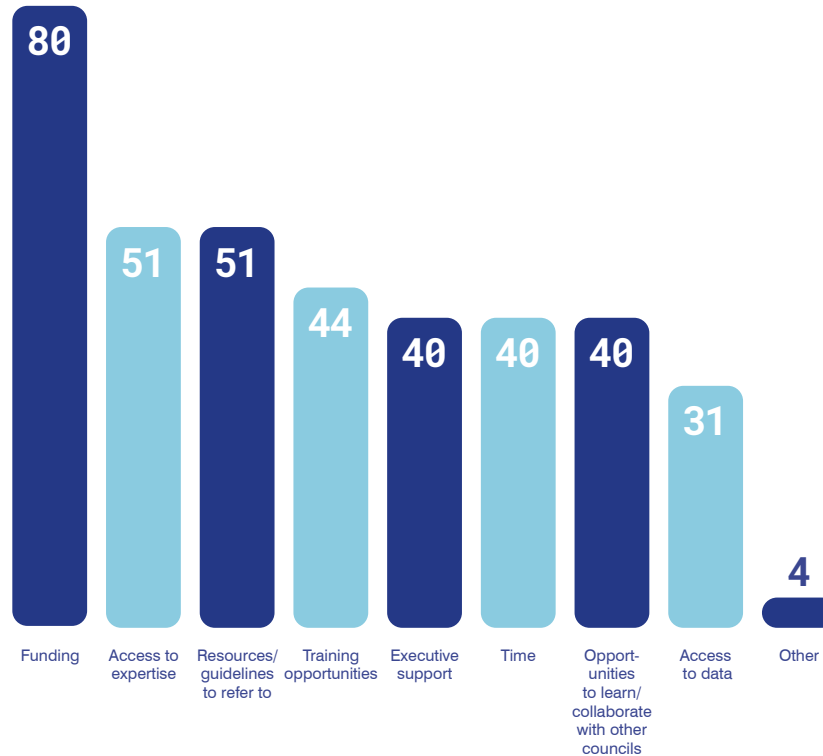
RESPONSIBILITY AND ACCOUNTABILITY

The entities councils and communities indicated should be most responsible to cover the costs of climate impacts were the federal government, fossil fuel industry and state government, with insurance coming in fourth (Figure 54).

Most councils (72%) and community groups (88%) said they would support a levy on fossil fuel exports to create a climate disaster fund. Support for low income and vulnerable communities was a key area of concern for many councils, with 26% already working in this space and many others wanting to but not resourced to.

Figure 56 Please select the top three entities you feel should be responsible to cover costs of climate impacts. (%)

The fossil fuel industry	89
Federal Government	77
State governments	74
Insurers	24
Local government	7
Local communities	7
Other	7
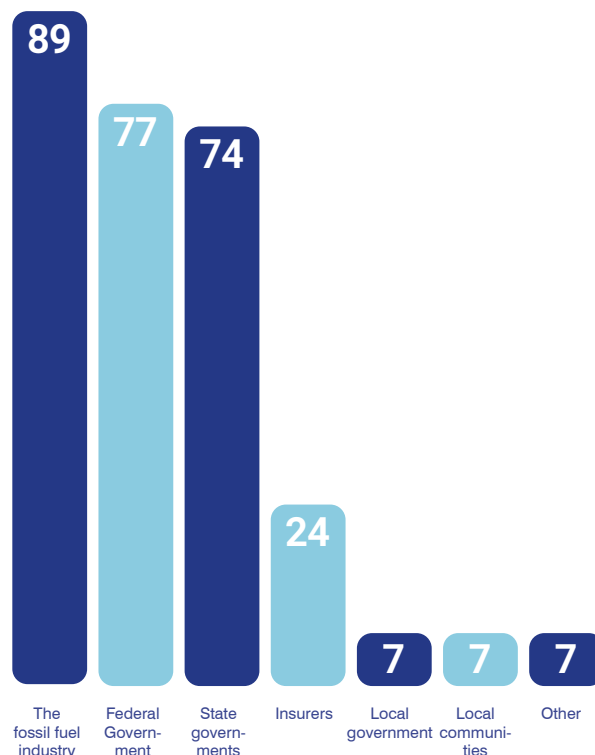
OPPORTUNITIES AND RECOMMENDATIONS

Local governments play a crucial role in addressing climate change adaptation and risk at the community level due to their responsibilities for land use planning, infrastructure development, emergency management, and public health and safety. Increasingly local governments are facing either legislative or litigative requirements to tackle climate change risk and adaptation efforts seriously and embed them across all levels of council operation.

Assessments commissioned by the Victorian Greenhouse Alliances underscore that the costs of climate hazards are rising exponentially, with projections indicating a 150% increase in costs by mid-century and by 350% by 2100.

For Greater Melbourne Councils, Average Annual Damages are estimated to be $90–120 million in present day, $210–300 million in the nearer future (150%) and $400–540 million in the more distant future (350%). Costs of climate change impacts will completely overwhelm councils' general budgets unless substantive resourcing approaches are developed to mitigate this risk.

Councils also need assistance to minimise risk and take steps towards adaptation and resilience. It is usually those councils with the greatest need and highest costs which have little capacity to undertake risk assessments. Some councils risk getting stuck in a cycle of recovery from the last event without being able to prepare for the next one. Rural, regional and remote councils are at high risk as they often cover large areas exposed to more climate risk, while receiving less funds from a low rates base due to their low population.

Local governments can:
- **Provide information on climate change actions, risks and adaptation to the community**
- **Prepare for high emissions scenario impacts by 2050**
- **Conduct physical and transitional risks assessments (both corporate and community)**
- **Advocate for nationally consistent climate data, risk assessment and adaptation frameworks**
- **Advocate for training and reporting resourcing**
- **Support vulnerable councils and communities to tackle climate impacts**

Climate risk and adaptation frameworks

The IPCC defines risk as a combination of hazard, exposure and vulnerability, with an impact defined as when a risk has been realised (e.g., a hazard occurred and resulted in damages) (Figure 56).

Adaptation is a response to the risks identified, aiming to reduce risk by reducing the exposure and/or vulnerability to a hazard.

The IPCC also provides a glossary of terms to support better understanding of terminology commonly associated with risk and adaptation, including vulnerability, resilience and impacts.

Figure 57 IPCC AR5 risk assessment framework where the risk of climate-related impacts results from the interaction of the climate-related hazards with vulnerability and exposure of human and natural systems.

Impacts

CLIMATE

Natural variability

Anthropogenic climate change

Hazards

Risk

Vulnerability

Exposure

SOCIO-ECONOMIC PROCESS

Socio-economic pathways

Adaptation and mitigation actions

Governance

Emissions and land-use change
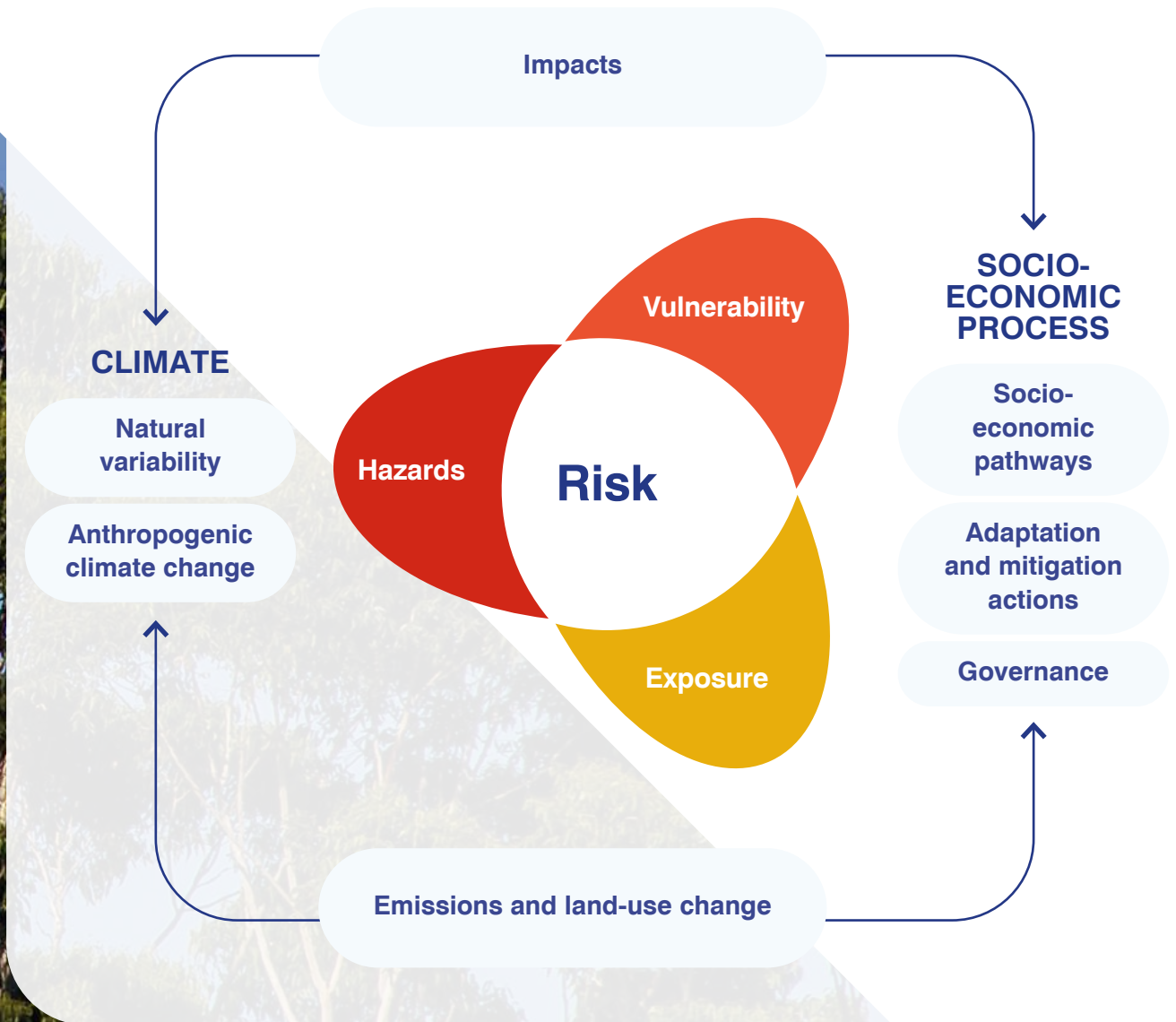
Compound risks are also emerging as a critical issue, where multiple factors combine to produce increased hazards. For example, the combination of hot weather and humid conditions exacerbates heat stress on humans and other animals. Health impacts from climate change and the pandemic are felt across both assets and service delivery.

Compounding climate risks have also been observed across the country, such as the increased bushfire weather influenced by extreme heat and droughts which can combine to produce disastrous impacts such as those seen during the Black Summer 2019/2020.

The window of opportunity to enable climate resilient development is rapidly narrowing. Risks to services and associated costs are highly uncertain, with many indirect and intangible impacts. The VCRC is currently undertaking a project called 'Climate change and emergency management' to understand risks and costs to emergency management services. Initial findings indicate staff are already extremely under-resourced to manage existing climate hazards, let alone future increased impacts.

The Federal Government is introducing new climate reporting requirements to support standardised, internationally aligned climate reporting for large businesses and financial institutions.

All Commonwealth entities and companies will also be required to publicly report on the physical and transitional climate risks and opportunities facing their organisation, and their management activities, by their FY2026/27 annual report.

Local governments will likely need to contribute to this reporting in the near future. Understanding local government climate risk and opportunities will help understand how to position the local government sector for best management and service delivery to the community. Risk assessments can be used to support assessment of council assets, portfolio benchmarking, due diligence, financial reporting and and integration into broader sustainability analysis.

A summary of risk and adaptation frameworks and resources are provided in the following table.

Table 14 Tools councils use to develop corporate inventories.

Title	Approach
IPPC risk framework	Hazard, exposure and vulnerability
Victorian Climate Resilient Councils program	• Goal setting and securing support. • Climate assessment and impact. • Response planning. • Implement priority responses. • Review, learn, progress.
LGNSW - Increasing Resilience to Climate Change	Survey of NSW councils and case studies of Council adaptation projects.
Climate Risk Ready NSW Guide	Whole of organisation risk management.
Climate Risk and Opportunity Management Program	Risk management for the public sector.
Commonwealth Climate Disclosure Pilot	Sets out climate disclosure requirements for departments of state based on a subset of the Australian Accounting Standards Board's Exposure Draft of the Australian Sustainability Reporting Standards.
Rural Councils of Victoria Climate Change Toolkit - Adaptation module	Guidance on adaptation for Victorian councils.
Taskforce on Climate related Financial Disclosures and International Sustainability Standards Board	Mandatory reporting under the Corporations Act from 24/25 and becoming common for government agencies.
Key report on hazards	Climate Measurement Standards Initiative Table TS1 in the Science Report produced by NESP for CMSI provides details on key climate hazards for Australia designed for use in risk assessment applications.
Geoscience Australia	Natural hazard resources including data, tools and research reports.
Climate Change in Australia	National and regional climate change projections.

Title	Approach
State Climate Tools	State-specific climate change projections: • Victoria. • Queensland. • New South Wales. • South Australia. • Western Australia. • Northern Territory.
QCoast2100	Program for local governments impacted by coastal hazards to implement cost-effective mitigation measures over the medium and long term, plan for development and growth, budget for higher costs, collaborate regionally and seek investment opportunities
National Emergency Risk Assessment Guidelines	Designed for assessing sudden onset hazards at various scales.
Adaptation tools for coastal areas	Coastal risk assessment and adaptation including data tools, manuals and case studies.
National Climate Change Adaptation Research Facility Guidance materials	Research summaries and briefing notes.
QCoast2100	Queensland government program providing funding, tools and technical support to enable all Queensland coastal local governments to progress the preparation of plans and strategies to address climate change related coastal hazard risks over the long-term.
Australian Standards	AS 5334-2013 (Climate change adaptation for settlements and infrastructure – A risk based approach).
International Standards	• The ISO 31000:2018 (Risk Management Guidelines) standard is a general risk management standard with governance structures, processes, review and feedback etc. demonstrating a sound risk management process. • ISO 14090:2019 (Adaptation to climate change – principles, requirements and guidelines). • ISO 14091:2021 (Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment) give more specific guidelines on adaptation.

Risk assessments should go further than just asset assessment and look at operational and service risks. Integrating climate risk management across council decision-making will increase efficiency and opportunities to mitigate impacts. Council leadership can galvanise the workforce and set up staff and the community to play their part in climate solutions. Given most hazards cross municipal boundaries, when looking at risks to the community, councils need to collaborate at the regional level.

Councils need to take a sustained, long term, strategic approach to climate risk management, so that they can gradually prioritise preparation and resilience rather than recovery.

The VCRC program is developing a suite of guidance materials and tools to assist councils. Resources like these should be developed in collaboration with state and federal governments to ensure a best practice and consistent approach and support application, at scale, for councils nationally.

Climate risk and adaptation frameworks need to be developed according to the best evidence base and data, but also require education and training in how to interpret this data, and take into account local factors. Providing risk and adaptation frameworks in priority regions could be used as models to support other areas.

Risk and adaptation remain complex knowledge areas beyond the scope of many general council staff and practitioners. There is little resourcing to enable sustainable approaches to managing climate risk and adaptation opportunities for councils and little guidance on how to account for interactions between sectors and systems, or connecting climate risk assessment with adaptation planning and actions.

Given the vast volume of service and community assets that fall to local government management and their role in supporting communities during extreme events, risk assessment and adaptation data and guidance for the local government sector should be a national priority.

The following table outlines some more specific actions different levels of government can take.

Climate risk and adaptation actions

Table 15 Actions to support effective climate risk management and adaptation across all levels of government.

Local government

- Develop council asset and community climate risk and adaptation plans.
- Ensure council-wide understanding and accountability of actions.
- Implement climate risk as core council business and reflect in CEO and key staff performance plans to align and integrate roles.
- Implement roles for local government in national, state, regional or sectoral plans.
- Provide cool spaces for community safety during heatwaves.
- Increase canopy in streets and public spaces shading commuter routes, parks and playgrounds, drought resilient planting.
- Support vulnerable councils and communities through knowledge and resource sharing
- Advocate for a local government climate sectoral plan.

- Advocate for effective resourcing to manage the costs of climate impacts and adaptation.
- Continue to share resources and strategies for climate risk and adaptation, focusing on scalable and adaptable projects to pool knowledge and resources, enhancing the ability of all councils to respond to climate impacts.
- Upgrade public infrastructure to account for extreme weather events.
- Participate in the Federal Community of Practice to share insights surrounding the management and disclosure of climate risks and opportunities for local government.
- Improve processes following natural disaster impacts.
- Consider impacts of climate change, including road placement, water sensitive design, isolation of communities, access and egress, vulnerability of services and access to services in Strategic planning.

- Build social resilience through community development.
- Provide regular bushfire, drought, flooding and other emergency education.
- Ensure council assets and community services are adapted to future conditions.

State government

- Legislate adaptation plans and regional adaptation strategies and frameworks.
- Coordinate funding to implement regional strategies and frameworks.
- Collaborate with the federal government to manage significant resources and infrastructure.
- Legislate and support all local governments to integrate climate risk assessments into all planning and development processes to ensure that climate resilience is a cornerstone of local governance.

Federal government

- Provide a national risk and adaptation framework for local government.
- Set agenda and coordination for subnational governments.
- Expand disaster ready funding to provide consistent and reliable funding to councils (not grant based).
- Identify gaps and national priority regions for adaptation plans and resourcing.
- Identify and support LGAs most vulnerable to climate impacts with the least capacity to respond.
- Develop a fit for purpose guide for local government adaptation and planning.
- Coordinate climate change and emergency management responses across regions and states

- Address current and compounding issues of staff and service delivery burnout.
- Provide national, regional and local modelling on costs of climate impacts to assets.
- Provide national, regional and local modelling on costs of climate impacts to services, including cascading and indirect impacts.
- Support local government coalitions at the state and regional level.
- Work towards consistent national climate risk and adaptation legislation and policies.
- Fund vulnerable local government areas to better understand and prepare for climate risks.
- Provide long-term funding to enable long-term planning.
- Structure collaboration and communication between stakeholders to make funds go further.
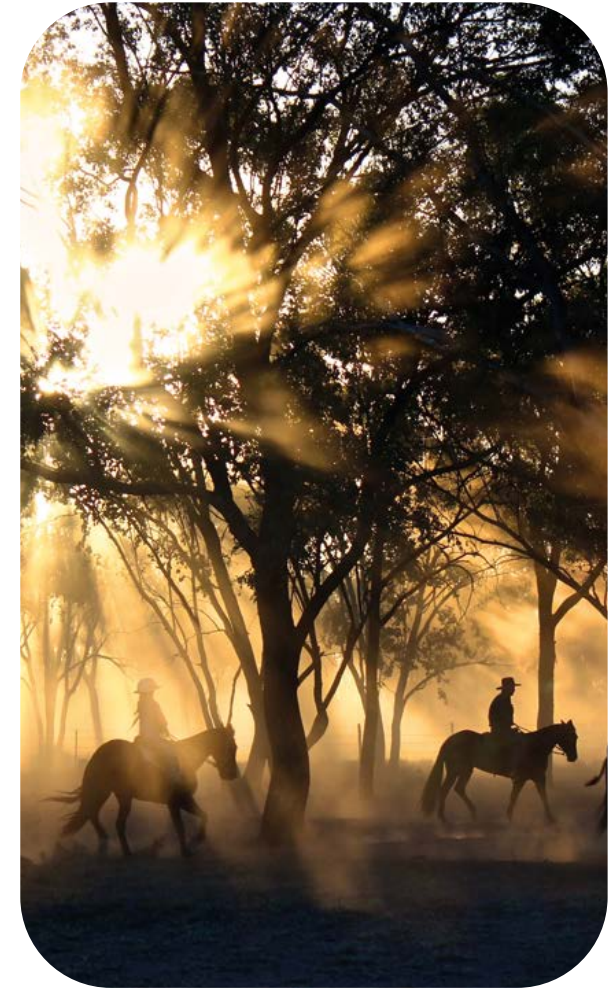
ADVOCACY AND COLLABORATION

This chapter relates to local government's role in representing and championing the interests, concerns, and rights of their municipal community, by advocating to state and federal governments.

....

There are many barriers for local councils to engage with federal and state government, which is further complicated as climate change falls across the portfolios of many Ministries. Local governments are administered by the states and territories, which can make engagement with the federal government challenging. The Australian Local Government Association (ALGA) represents the State and Territory local government associations as the national voice of local government and participates in a number of federal Ministerial Councils.

All levels of government are starting to align their climate change approach and much can be achieved with all levels of government working collaboratively to ensure a safe outcome for all Australians. Working groups for each state and territory that align with the sectoral plans to provide regular feedback and recommendations to state and federal governments. The working groups can prioritise resourcing and target the most vulnerable communities first and foremost.

SURVEY RESULTS

Most councils (74%) have undertaken some advocacy to state or federal government on climate change issues in the past 12 months, most via a state Local Government Association or third party, such as a Greenhouse Alliance or Regional Organisation of Council. A significant number (36%) have not done any advocacy or are unsure about it and most (41%) are unsure if they are planning further advocacy in the coming 12 months, suggesting there could be improved processes in this area.

Most councils (57%) support a strong federal 2035 target aligned with 1.5°C. Many councils feel that the role of local government is critical in meeting national and global climate targets (Figure 56), while also feeling that the local government contribution to the climate challenge is not adequately recognised by the community, state government and federal government. International programs are seen as valuable, but not essential.

Staff working on climate change varied from 0.1–1,800 FTE staff. This is a significantly larger range than previous years, which suggests that the higher end of the response is likely based on the view that all council staff are working on climate, sustainability or environment policies. If so, this is a positive indication of a critical integration outcome and reflects the growing sentiment that climate change is the responsibility of all staff within the council.

It remains the case that most councils

(60%)

had

5 or less

FTE staff working on climate related activities.

Figure 58 How important is the role of local government in meeting national/global climate targets, where 1 = not important and 10 = essential? (%)

1	2	3	4	5	6	7	8	9	10
1	2	1	0	8	4	18	21	10	36
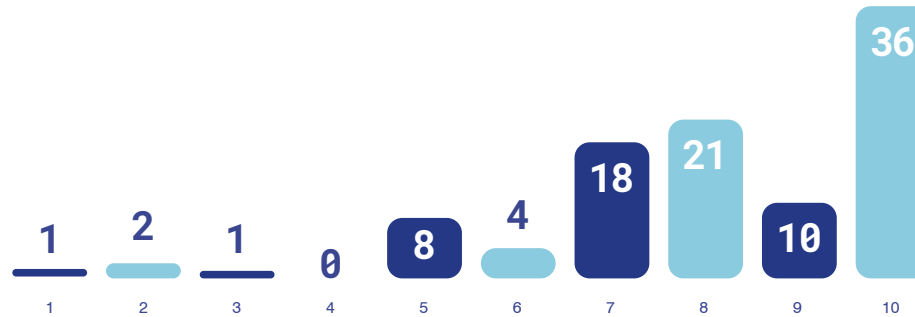
Figure 59 Do you feel the local government contribution to the climate challenge is adequately recognised by each of the following? (%)

	Community			State government			Federal government		
	Yes	No	I don't know	Yes	No	I don't know	Yes	No	I don't know
	31	56	12	29	58	13	12	66	22

Councils feel that their communities are somewhat or very engaged (58%) in developing and implementing climate plans, while a significant proportion remain somewhat or very disengaged (34%).

Councils partner with a range of community groups and often support local leaders working in the climate space, most often through in kind support or grants and resourcing.

Most councils

(78%)

participate in a regional local government climate group and generally find these effective to deliver projects, share skills and resources.

Councils work in partnership with a range of organisations including state local government associations (57%), regional collaborations, Ironbark, Climate Emergency Australia and a range of community and not-for-profit climate organisations (Figure 60).

Figure 60 Does your council work in partnership with any of the following organisations or programs? (%)

State Local Government Association — 57

Greenhouse Alliance/ Regional Alliances (e.g. ROC) — 50

Ironbark Sustainability — 41

Climate Emergency Australia — 38

Community organisations — 36

ICLEI — 20

Other — 15

Global Covenant of Mayors on Climate and Energy — 13

Climate Action Network Australia (CANA) — 6

C40 Cities Climate Leadership Group — 4

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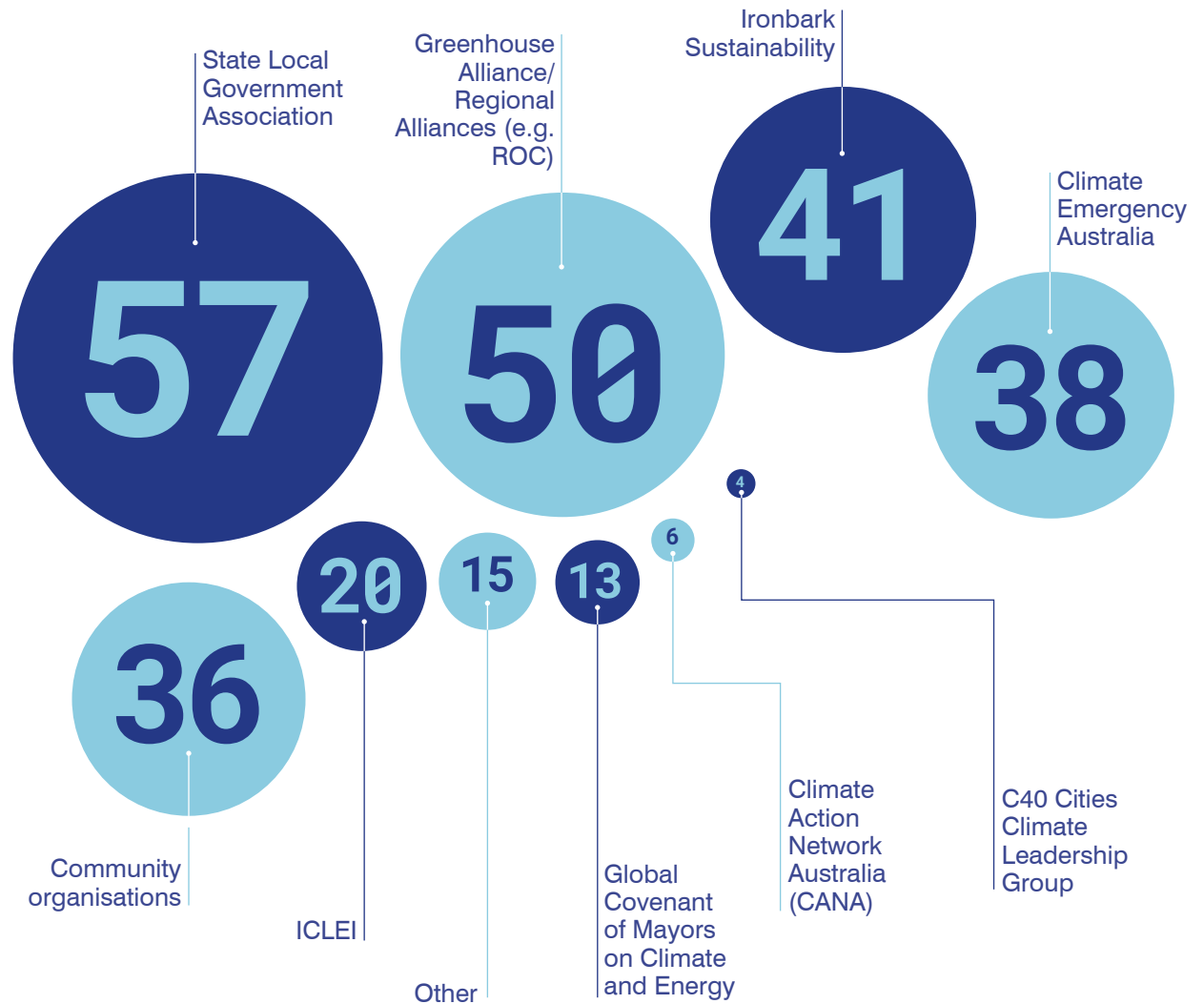
**Being part of EAGA (Eastern Alliance for Greenhouse Action) has magnified our voice when it comes to advocacy and initiating relationships, and it has also enabled us to be involved in a number of multi-council programs which we could not have effectively run or funded by ourselves (e.g. community net zero transition report, EV fleet transition plan, Victorian Energy Collaboration, battery studies, assessments of the adaptive capacity of council assets)."

"

Survey respondent

"

Regional collaboration is really good for isolated Council staff that don't get much support at home to meet and discuss ideas with other like-minded people, and be exposed to case studies and other ideas that might be suitable in our own community.

"

Survey respondent

Areas where councils indicated they need further assistance include climate change adaptation strategies and risk assessments, emissions inventories, prioritising mitigation actions and reporting on the progress of plans.

Figure 61 Does your council support low income or vulnerable communities on climate? (%)

No	Yes	I don't know
55	26	18
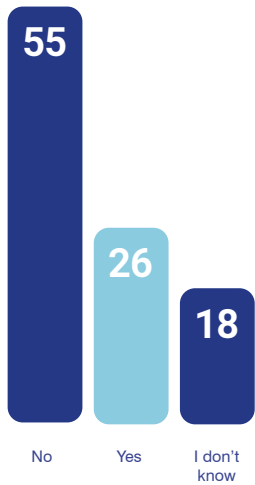
Many councils identified that national or international reporting and verification of inventories was important and saw tangible benefit in contributing to a global reporting platform. However, most did not engage with any reporting platforms, and only a few connected to the Global Covenant of Mayors or CDP for cities platforms.

Most councils do not have clear tasks on climate for the upcoming federal election but were wanting to see a national campaign about local government successes and challenges in climate action to boost public and federal/state support and awareness. They were also clearly supportive of a strong federal 2035 target aligned with

1.5°

Figure 62 Does your council support a strong federal 2035 target aligned with 1.5°C? (%)

Yes	I don't know	No
57	33	9
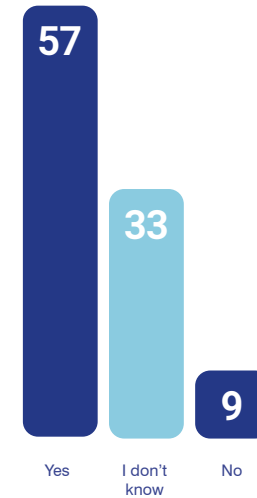
Councils participate in many advocacy topics. These include actions for local government capacity and roles, access to support and programs, and climate change mitigation and adaptation projects to protect the region.

Some current examples of advocacy, drawn from survey responses, are outlined in the following table.

Table 16 Advocacy recently undertaken by councils relevant to the net zero transition plans.

ENERGY
- Advocacy on behalf of residents vulnerable to bill stress and making sure emissions reductions, electrification rebates and programs are well suited to our residents' needs.
- Street Lighting tariffs.
- Building standards.
- Stronger targets and renewables transition.
- Heat pumps for swimming pools.
- Energy trading.
- Nexus between emissions reduction and energy security.

BUILT ENVIRONMENT
- Climate ready building standards.
- Ensuring planning schemes support zero carbon and resilient development.
- Residential housing build quality, and increasing the minimum standards.
- Supporting individuals and households (especially those on low incomes) to take action to save energy and reduce emissions.

TRANSPORT
- EV and charging infrastructure.
- Fuel efficiency standards.
- Improved public and sustainable transport.
- Heavy vehicle availability.
- Changing laws to allow micro mobility devices (eg scooters).

WASTE

- Product stewardship for waste.
- State Waste Infrastructure Plan review.

LAND USE/AGRICULTURE

- Carbon Farming and other environmental credits.
- Tree canopy protection, increasing canopy cover and blue/green infrastructure.
- Diversify community income streams and move land use before they are consumed by CC impacts.
- Improve the holistic outcomes around biodiversity.
- State carbon offset credit policy.

ENGAGEMENT

- Supporting local community organisations (including schools) to take climate action.
- Communication infrastructure.
- Youth leadership.

CLIMATE RISK AND ADAPTATION

- Urban heat.
- Flooding.
- Water management.
- Coastal management and hazard assessment data.
- Building community resilience.
- Funding for climate adaptation for building back better following natural disasters and extreme weather events.
- Flood and inundation mapping combined with plans and policies to provide certainty about where to direct development.

MULTILEVEL GOVERNANCE

- Federal climate related financial disclosure standards.
- Funding councils to implement climate change action.
- Opportunity of COP31.
- State planning scheme reviews and amendments.
- Encouraging other LGs to develop and strengthen climate action plans and targets.
- Adopting a 'climate lens' for all government policies and operations.
- Representation on regional and state committees.
- National Transition Authority
- Design and implementation of Resource support.
- Change to National Construction Code.
- Climate Emergency declarations.
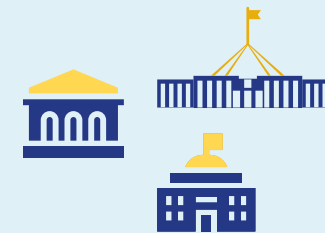
BARRIERS

Councils clearly stated that they would like to take more action on advocacy, but there are a number of barriers including:

- limited staff time and resources to undertake advocacy activities
- considerable time and support needed to facilitate approvals from management and elected members
- lack of templates and resources to get started
- limited coordination between local government bodies on climate advocacy priorities and activities
- lack of formal arrangements and governance for vertical and horizontal collaboration.

"

Councils increasingly face extra costs through insurance risk, more reporting, adapting to the higher temperatures, and ensuring we are prepared for the future. These costs hit Regional Councils hardest; their ratepayer base is not increasing, while other costs are, and we are all struggling to keep up.

How does a regional Council with six employees add climate change into their considerations? How do they complete a climate change scenario risk assessment of their assets and infrastructure when there is no budget? Regional councils get hit with floods and bushfires, costs that metro councils generally are not faced with, or can manage due to higher ratepayer base.

Insurance companies are not insuring for floods, but how does a council avoid the impacts on roads or bridges. They are expected to return all their infrastructure to working condition within weeks of a flood, irrespective of the damage.

Reporting for Scope 1, 2 and 3 emissions could also be done for all, as most councils can't afford licence fees for existing software tools. Regional and rural councils need help so we are not left behind by the metro councils with everything else hitting us, noting we are benchmarked against City Councils with 100 times the resources.

"

Survey respondent

OPPORTUNITIES AND RECOMMENDATIONS

Many councils are undertaking regular climate advocacy conducted through informal networks and working groups, set up by interested and passionate parties. Regional alliances are effective in coordinating interests and expertise as well as collaborating to develop submissions and build relationships, but much of this work is not well resourced.

Community of Practice networks such as Electrify Everything work well to gather evidence of effective approaches, then develop and share resources for many councils to use. These networks could be replicated for a range of different programs and projects that councils can implement, particularly with state and federal support.

Many councils are keen to engage and support vulnerable groups but do not always have the relationships or resources to manage this work.

Local councils see the need to actively reach out and create new pathways to support vulnerable groups and form networks with the community to make sure vulnerable voices are represented.

Electrify Everything

The Electrify Everything Community of Practice, led by Merri-bek City Council, is a collaboration between local councils to promote the electrification of homes in Australia. The Community provides tools, support, and knowledge exchange across regions and the country.

Since it commenced in February 2022, 86 regional and urban councils have joined. In 2023 the Community led a national communications campaign to amplify the message of electrification which has so far reached over 677,000 Australians.

Merri-bek City Council Solar and Thermal Subsidy Program

Merri-bek City Council has a long-standing commitment to prioritising climate justice in its overall response to the climate emergency. Merri-bek's Solar and Thermal Subsidy Program provides a 'one-stop-shop' concierge service for low-income households to either install a solar system or an energy upgrade of insulation and/or draught sealing measures.

Resident's are supported through the whole process, including carefully assessing their home for suitability, gaining access to state government rebates, as well as a financial subsidy provided by Council.

The success of the program comes from deliberate program design including:

- A personalised concierge service provided by Council staff to support residents throughout the various program stages, including eligibility, suitability of program offerings, right through to completion.

- A foundation of trust established by Council with the resident from the outset and is based on not only using experienced, vetted service providers, but Council's commitment to serving its community.

- Targeted engagement and promotional activities including utilising Merri-bek's innovative 'Community Connectors' network, translation and interpretation services, to maximise program awareness and uptake.

- Dedicated assistance in navigating the sometimes-complex process of applying for federal and state government rebates and interest-free loans.

- Financial subsidies provided by Council (up to $3,000 for solar or $2,000 for thermal) to address the up-front cost challenges.

There are opportunities to establish stronger advocacy networks and influence across councils to support more effective decision-making across the board. Collaboration initiatives such as Better Futures Australia, a program of Climate Action Network Australia, can also support local government at scale.

Advocacy can establish a vertically integrated climate policy framework that enables the three tiers of government to work in partnership around shared objectives for CHAMP implementation. Recognition of Council contributions to the NDCs can amplify the role local government can play to mitigate and adapt to climate change and support multilevel governance.

Councils require early communications on advocacy topics, councillor and executive education, and then a formal decision by council on joint advocacy via a greenhouse alliance or similar.

It was noted that with the Cities Power Partnership disbanding, the time was ripe to reinforce existing or form a new, strong, common advocacy group and coordination. It was also noted that local governments do not really have a seat at the decision-making table federally, and that there should be regular opportunities to collaborate with state and national decision makers.

Councils need more resourcing to tackle climate change at the speed and scale required, and to deal with the growing impacts. They need to clearly articulate the role of local governments, with clear asks for state and federal support, in driving more effective action across the board.

Local governments can also reflect critical voices in their local communities and regions. Many mayors have inadvertently become experts on emergency management and become a trusted voice to advocate for the community, allowing them to dispel misinformation.

Councils can also collaborate with national agencies or endorse or support national campaigns. One such campaign aims to redirect federal subsidies from fossil fuel organisations (estimated by the IMF at $65 billion in 2022) to council climate action and adaptation, particularly given the increasingly difficult insurance costs and other limitations councils are facing. Councils can also subscribe to campaigns such as the Fossil Ad Ban and Fossil Fuel Non-proliferation Treaty.

State-based local government associations can play a leading role in administering and channelling recommendations through state and federal governments more strategically.

Much can be done to strengthen and streamline existing advocacy channels and build a more effective, united and loud voice to represent local council and community interests.

Advocacy actions

Recommended advocacy approaches to support multi level governance are summarised in the following table.

Table 17 Recommended advocacy actions to better support multilevel climate action and governance.

Community groups (local – national)

- Run local climate campaigns to drive more ambitious council targets and action.
- Run regional, state or national campaigns to support effective resourcing of local climate action and protections for vulnerable communities.
- Actively participate in local government consultation and engagement to accelerate local climate action.

Local government

- Support local community groups with financial and/or practical support, and ensure vulnerable groups are represented.
- Support regional or state climate campaigns.
- Develop relationships and regional points of contact for First Nations engagement.

- Join or form peak bodies, associations and alliances to drive ambitious action and provide specific policy recommendations.
- Provide regular information to the community on local, state and national climate action that is supporting the local area.
- Apply a climate lens across all operations, expanding support mechanisms and integrating climate change into finance, risk, monitoring, evaluation and community initiatives.
- Identify and minimise exposure to banks financing the fossil fuel industry.
- Share knowledge libraries and lessons learnt for policies, strategies and plans and implementation.
- Provide staff training on emissions reduction and embed actions across council portfolios.
- Investigate opportunities to collaborate with other councils on implementing specific interventions.
- Connect community groups and support them to achieve outcomes.

Regional alliances and Local Government Associations (LGAs)

- Form, align or strengthen existing advocacy working groups to provide advice and collaboration to national sectoral plans.
- Provide governance/administrative support to regional working groups.
- Advocate for a strong 2035 federal target aligning states and councils to NDC.
- Build relationships with insurance sector to better protect infrastructure from climate impacts.
- Increase influence of local government sector with state and federal departments.
- Provide ALGA with strong consistent climate messaging, aligned with sectoral plans.
- Provide resources such as template reporting, action plans, community-wide data and risk assessments to support cost effective action at scale.

- Provide support on priority topics for local government for effective advocacy.
- Share best practice information about transitioning to zero emissions.

State government

- Represent national interests to secure funding and regional alliances to drive effective climate programs and projects.
- Count contributions to state targets.
- Support annual events to drive collaborative emissions reduction initiatives with regional council groups and other key stakeholders.
- Provide strategic alignment and resource state or regional programs to support corporate and community-wide climate actions.
- Amend state Local Government Acts to legislate Climate Change responsibilities to enable a fair, equitable and inclusive transition to net zero emissions, and adapt to the climate change impacts already locked in.
- Pursue multilevel governance opportunities with local government.

Federal government

- Resource LGA and regional alliances to drive effective climate programs and projects.
- Provide long term (not grant) secure funding to enable councils to plan and deliver pipelines of work.
- Count LGA and state contributions to national targets.
- Set up systems and resourcing to support nationally consistent reporting and community-wide emission and climate risk information tailored to the local government sector – and resource LGAs to coordinate contribution.
- Host a biannual multilevel governance climate congress.
- Provide strategic alignment and resource regional or national programs to support corporate and community-wide climate actions.
- Facilitate regular round table meetings between local government working groups, elected members and state and federal ministers.

- Develop iterative funding cycles and strong legislation for ongoing climate adaptation planning.
- Coordinate knowledge systems across all layers of government and ministerial offices.
- Establish governance of CHAMP and implement CHAMP to facilitate multilevel governance contributions.
- Fund state local government associations to coordinate collective feedback, for each net zero sector, to state and national governments.
- Host annual events to drive collaborative emissions reduction initiatives with councils, regions and states.

Federal advocacy positions

The following points have been developed by the [Victorian Greenhouse Alliances](#) and can be used by other regions to develop their own federal advocacy positions:

- Strengthen the national emissions reduction target to be consistent with latest science.
- Strengthen existing policy frameworks and support the implementation of new complementary policies to ensure interim and long-term targets can be met.
- Establish a vertically integrated climate policy framework that enables the three tiers of government to work in partnership around shared objectives and to develop a multilevel governance approach, working collaboratively for the same outcomes.
- Allocate sufficient funding for mitigation and adaptation measures at the local government level, based on shared objectives and the latest evidence base.
- Develop no new domestic oil, coal or gas projects and ensure a staged phase out of all fossil fuel extraction, production and export.
- Cease all federal subsidies, spending and tax breaks for fossil fuel industries.
- Encourage a robust local offset market that prioritises drawdown of greenhouse gas emissions and maximises co-benefits for First Nations and regional communities, while supporting compliance schemes (without compromising carbon budgets).
- Ensure all voluntary action taken to reduce emissions is additional to Australia's international obligations and Nationally Determined Contributions (NDC).
- Provide a legislated and funded package of policy solutions that will transform Australia into a world leader in clean exports and manufacturing.
- Secure funding for local governments to undertake proactive asset betterment, to build back better after disaster events.
- Amend the Climate Change Act 2022 to include objectives, principles and processes to guide a fair, equitable and inclusive transition to net zero emissions, and adapt to the climate change impacts already locked in.

CONCLUSION

Local governments' purpose is to serve their communities. This includes preparing communities for a transition to zero emissions and climate impacts.

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Communities and councils are already feeling the impacts of climate change on their local community or council operations. Most do not feel prepared to deal with these impacts and when climate-related disasters strike, it is local governments that hold the most significant – and immediate – burden of any level of government.

LOCAL GOVERNMENTS

Local governments are the best placed level of government to connect to and protect local communities and, with the collaboration of state and Federal governments, to reimagine and rebuild our communities. With a long and deep track record of efficient and effective programs to reduce emissions, councils are ready to support state and Federal climate initiatives.

This challenge is as big a challenge as we have ever faced as a nation, and in order to do it together, local governments are calling for state and federal government support to scale up and amplify programs for all councils.

There is a network of skilled, purpose-driven and collaborative staff working across councils to deliver outcomes and climate action for their communities. Tapping into this network via strategic and targeted program support will rapidly align with Australia's federal and state ambitions.

All councils are at different stages of the journey, and have varying priorities and resources. Collectively, local governments are uniquely poised to implement effective climate actions, but will need support from the other levels of government to scale up across the community.

STATE AND FEDERAL GOVERNMENTS

State and federal governments can drive corporate emissions reduction by:
- Developing and resourcing programs to support council corporate mitigation programs.
- Funding local councils to undertake activities such as energy or fleet upgrades.
- Provide advice, frameworks and resourcing for local government reporting requirements.

State and federal governments can drive community-wide climate action by:
- Developing and resourcing state or regional programs to support council's community-wide mitigation programs.
- Delivering on the commitment to recognise local government contributions to NDCs explicit in the CHAMP agreement.

To work with councils to prepare and protect communities from the impacts of climate, state and federal governments can help by:
- Resourcing community groups to deal with climate impacts.
- Incorporating climate risk into each state Local Government Act and support councils in understanding and responding to risks.
- Developing and funding national, state and/or regional programs to support councils' corporate and community risk/ adaptation program.
- Providing strategic alignment and resource state or regional programs to support corporate and community-wide climate actions.

Government can work towards greater consistency and support to lift the less capable or resource constrained councils. Local government associations, informed by regional alliances and local working groups, can coordinate with the state and federal government to coordinate advocacy and share information between councils.

Local governments stand uniquely poised to implement climate actions across most sectors, from clean energy adoption to sustainable transport infrastructure. Working in collaboration across all levels of government will ensure a better future for all Australians.

APPENDIX 1

FEDERAL AND STATE GOVERNMENT POLICY LANDSCAPE

Australia's climate policy landscape is rapidly shifting towards more effective and ambitious approaches, supported by both state and federal government initiatives. At the federal level, Australia's climate policy is waiting for updates from the Climate Change Authority and Net Zero Transition Authority regarding recommended 2035 national targets and sectoral plans.

Most Australian states and territories have taken proactive measures to address climate change through their own policies and initiatives.

State renewable energy targets, emissions reduction schemes, and climate adaptation strategies to reduce greenhouse gas emissions and build resilience to climate impacts are in some cases world leading. Work is ongoing to promote energy efficiency, renewable energy investment, and sustainable transport options.

Coordination and collaboration between federal, state and local governments remains essential to achieving Australia's climate objectives effectively. A unified and coordinated effort across all levels of government is crucial to tackling the complex challenges posed by climate change and transitioning to a low-carbon economy.

Federal government

The Federal Government has signed up to the Paris Agreement, in line with the global goal to keep warming to well below 2°C and pursue efforts to keep it to 1.5°C.

The government is currently developing six sectoral plans to build a National Net Zero 2050 plan, to ensure Australia maximises the benefits of the global transition and provides long-term policy certainty to drive investment in low emissions and renewable technologies. Local government and communities can play an important role in providing feedback to these plans and implementing and supporting further policy design.

State climate targets and policy overview

Climate targets of all states and territories are also broadly in line with the Paris Agreement. Interim targets and plans and strategies are critical to accelerating emissions reduction in the short term.

Table 18 Summary of state/territory climate targets, strategies and initiatives.

State/territory	Climate target	Climate plan/strategy
National	Legislated net zero target of 2050, with an interim target of 43 per cent below 2005 levels by 2030.	National Net Zero 2050 plan under development, including sectoral plans
New South Wales	Net zero emissions by 2050; interim targets: 50% reduction by 2030, 70% by 2035 (below 2005 levels).	NSW Climate Change Policy Framework
Victoria	Net zero emissions by 2045; interim targets: 28–33% reduction by 2025, 45–50% by 2030; 75–80% by 2035 (below 2005 levels).	Climate Change Strategy
Queensland	Net zero emissions by 2050; interim targets: 75% below 2005 levels by 2035.	2035 Clean Economy Pathway
Western Australia	Net zero emissions by 2050; no interim targets specified.	WA Climate Policy
South Australia	Net zero emissions by 2050; more than 50% by 2030 (from 2005 levels).	SA Government Climate Actions
Tasmania	Net zero emissions by 2030.	Tasmanian Climate Change Action Plan 2023-25
Australian Capital Territory	Net zero emissions by 2045; interim target: 50–60% reduction by 2025, 65–75% by 2030, 90–95% by 2040 (from 1990 levels).	ACT Climate Change Strategy
Northern Territory	Net zero emissions by 2050; no interim targets specified.	NT Climate Change Response: Towards 2050

A summary of state and territory, and local government and community targets and commitments, shows how ambitious commitments are tracking and also reports on local government memberships to various climate programs such as the Global Compact of Mayors, C40, Cities Race to Zero, ICLEI and the Climate Active program.

Figure 63 Key state and territory legislative and policy frameworks for Climate Change mitigation in Australia.
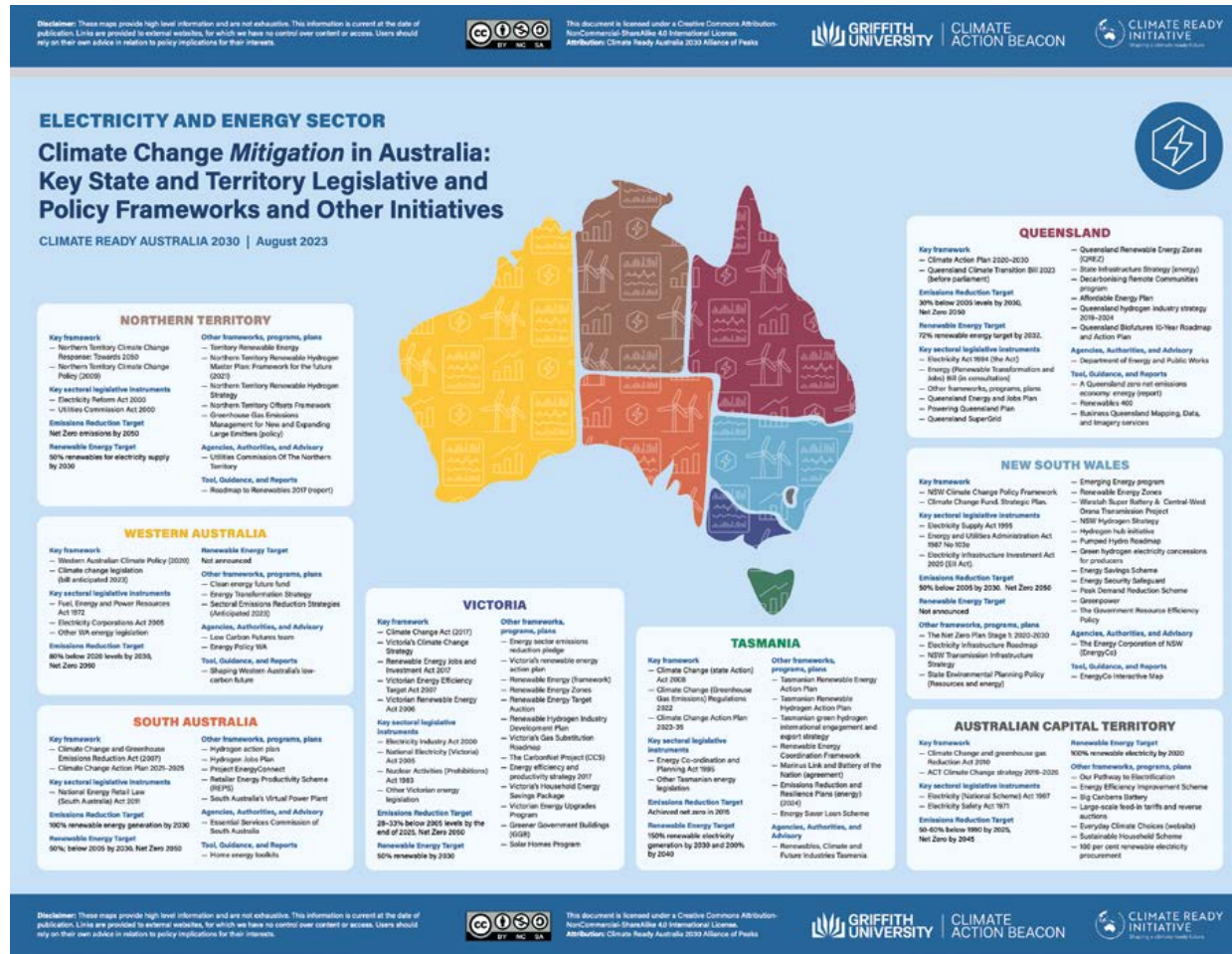
Local government state associations

Local government associations (LGAs) are the core advocacy body for local governments at state level. These organisations are typically member based and are called upon by many organisations to respond to matters of import to LGs and communities.

Common additional roles include building the capacity of councils, including of elected councillors, creating LG networks, policy and strategy and procurement services.

The Local Government Association of Queensland (LGAQ)

LGAQ is the peak body for local government in Queensland. It is a not-for-profit association set up solely to serve the state's 77 councils and their individual needs. The LGAQ has been advising, supporting and representing local councils since 1896, enabling them to improve their operations and strengthen relationships with their communities.

Western Australia Local Government Association (WALGA)

WALGA's Climate Change Declaration has been signed by 60 WA LGAs, representing around 87% of the population. Members were surveyed at the beginning of 2024, to support the update of WALGA's climate policy and advocacy positions on climate, which will be released later this year.

WALGA hosts an annual one-day training program on Climate Risk Assessment, and provides a suite of events, templates and tools for its members and advocates for the Pilot Regional Climate Alliance model to be funded and extended.

WALGA is coordinating the purchase and installation of 105 units of charging infrastructure on behalf of 22 WA LGAs, who will purchase 129 light BEVs, funded in partnership with the Australian and WA Governments.

An Urban Canopy Grants program is being coordinated by WALGA to create cooler and more sustainable communities and we are assessing current carbon reporting tools and their effectiveness for LGA use.

Local Government Association of South Australia (LGASA)

LGA of South Australia continues to work with councils and our key state government partners to accelerate climate action across the sector, delivering two key projects through the Climate Partnerships program.

- The Net Zero Accelerate Program is delivering first-pass emission inventories for 15 regional councils and a sector-wide emissions profile for all local government operations, as well a best-practice guide for carbon accounting and net zero planning.

- Climate Risk training and awareness resources targeted at Elected Members and Senior Executives of Council, assisting to build capability and understanding of council's role and duties in managing climate risk, and establishing good climate governance.

To supplement these projects and lead strategic direction for the sector, the LGA is also finalising a Climate Change Support Plan for local government, and is about to undertake a business case for a whole-of-state Climate Ready Regions Program, looking for co-investment into a partnership model for accelerated climate action at local and regional levels across all of SA.

Local Government Association of NSW (LGNSW)

LGNSW works with councils to support, promote and improve communities throughout our state and supports member councils in their efforts to deal with and adapt to a changing climate.

It has programs and resources to support Increasing Resilience, Planning for Climate Change and adaptation and mitigation case studies and resources.

Local Government Association of Tasmania (LGAT)

With funding from the Tasmanian state government, LGAT is delivering the Tasmanian Local Government Climate Capability Program. This program aims to increase the capability of Tasmanian councils to take climate action and embed climate considerations into their operations and services.

Key focus areas for the program include:

- developing baseline responsibilities for council climate action and a pathway for action
- knowledge sharing
- embedding climate governance sector-wide collaborative funding bids, and
- enhancing the channels of information and influence between decision-makers and climate officers.

Phase one of the Program is underway and involves co-designing the Program activities with councils. This codesign process will ensure participants are highly engaged, supportive and connected, and allow them to shape the deliverables of the Program that will build on work already completed.

Phase two of the Program will deliver the activities identified through Phase one.

LGAT also supports councils on climate-related portfolios including disaster resilience and emergency management, waste, transport, planning, and health and wellbeing.

Municipal Association of Victoria (MAV)

Following the release of the MAV Strategic Plan 2024/2027 and Annual Plan 2024/2025, the MAV has re-focused its efforts on supporting Victorian councils to drive climate action and enhance the resilience of their communities.

It works across the transport, waste, planning, public health and emergency management portfolios to advocate on behalf of councils for clear policy guidance, direct resourcing for climate action and support to address climate risk.

Some key initiatives include:

- Supporting mode shift to active transport in partnership with VicHealth.
- Supporting the development of refreshed guidance on Municipal Public Health and Wellbeing Plans.
- Advocacy for product stewardship including a more comprehensive container deposit scheme.
- Enabling 33 councils to engage suppliers through the energy efficient street lighting procurement panel.
- Participating in a project to improve the consideration of climate change in emergency management processes.

- Supporting 24 Council Alliance for a Sustainable Built Environment councils to submit a planning scheme amendment to introduce planning policy that elevates sustainability requirements for new buildings.

In 2024, the MAV developed a refreshed climate position statement and program of work to support councils to accelerate climate adaptation and mitigation. The MAV continues to collaborate with key partners on advocacy and policy initiatives, including the Victorian Greenhouse Alliances and the Association of Bayside Municipalities.

APPENDIX 2

LIST OF FIGURES AND TABLES

RESOURCES