# COMMUNITY CLIMATE CONVERSATIONS

# COMMUNITY CLIMATE PANEL REPORT

**JUNE 2023** 

# IN THIS REPORT

South Australia's Community Climate Panel	3
Who is the Community Climate Panel?	4
Preamble	5
The importance of emissions reduction	6
Our key messages to SA government	6

### The Big Ideas

Overview: the big ideas we need to discuss	8
How we move: accessible low emission public transport	9
How we move: accessible clean personal transport	13
What we build: sustainability in construction and infrastructure	22
What we consume: understanding carbon emissions for goods and services	28
What we consume: agricultural emissions - what we grow produce and eat	33
How we power ourselves: community microgrids	38
Attachment A: Community Climate Panel demographics	44

## SOUTH AUSTRALIA'S COMMUNITY CLIMATE PANEL

The South Australian Community Climate Panel has kickstarted a statewide conversation about how to involve the community in reducing emissions, as South Australia works towards net zero carbon emissions by 2050.

We have determined the big ideas that South Australia needs to pursue, and the actions that we think are needed to achieve net zero – even those which are difficult to implement. For each action, we have considered the role of all South Australians, the role of the community and non-government sector and also the role of Government.

We met across 6 sessions over 23 hours in total to consider the following:

### THERE ARE MANY OPPORTUNITIES TO REDUCE OUR GREENHOUSE GAS EMISSIONS; SOME WILL HAVE MORE Impact than others. Which of the opportunities do south Australians need to discuss?

This report contains our advice and the outcomes of our work.

This report will be used in two ways. It will be provided in full and in its entirety to the project sponsors (South Australians for Climate Action, The Conservation Council of SA and the South Australian Department for Environment and Water) to inform the progress towards net zero.

It will also be used to prepare the Community Conversation Guide – which will be used by community groups all across South Australia as they embark on conversations to consider this question.

There is a separate report which contains individual submissions from some Community Climate Panel members, who wanted the opportunity to share their detailed thinking with Government.

This project is being sponsored by the Department for Environment and Water and is a partnership between the Conservation Council of SA and South Australians for Climate Action.



## WHO IS THE COMMUNITY CLIMATE PANEL?

The Community Climate Panel is made up of 53 people independently selected to participate in the South Australian Community Climate Panel (the Panel). We are South Australians who want to contribute to this important conversation.

During March 2023, over 80,000 South Australians received an invitation to register their interest in being a part of the Panel. Participants were selected using a random stratification approach for diversity in line with demographics matching the South Australian population for age, gender, location, home ownership, educational attainment and attitudes towards climate change.

Graphs, which show the makeup of the panel are found at Attachment A.

#### FACILITATORS NOTE:

This report was written by the Community Climate Panel participants in their own words.

The only exceptions to this are the introduction section "South Australia's Community Climate Panel" and "Who is on the Panel", which were written by independent facilitators democracyCo.

The ideas in this report were carefully developed by the Panel, informed by expert advice, their own research and their own lived experiences and they gained at least an 80% consensus from the group (most above 90%). Following the six workshops (23 hours) that the Panel participated in, democracyCo edited the report to ensure that there was consistency between sections, as well as proofing spelling and grammar.

democracyCo have not changed or added any ideas, and where there was any doubt as to the intent of what was written, we have referred back to the earlier content that Panel members created during their workshops or have checked-in with Panel members to enable them to clarify their intent.

No other organisations or individuals have added to or edited this report.

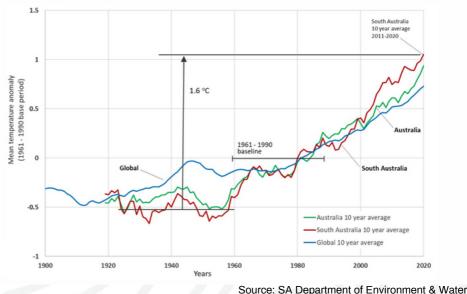


## PREAMBLE

We are living on a planet that is rapidly warming, in a country that is warming faster than the global average, and in a state that is warming faster than our country's average.

Our country and our State are experiencing this more rapid increase in average temperature rise because of our large land mass and reduced temperature buffering impact that the ocean provides.

The escalating impacts of climate change will be felt by all South Australians, but most acutely by those in regional and remote



#### Average temperature: Global, Australia, South Australia

Source. SA Department of Environment & Wate

inland areas of South Australia, including our agricultural lands.

The South Australian community may not be large contributors to climate warming pollution directly, however due to the significant impacts that climate change will increasingly have on our home state, it is in our best interests to demonstrate leadership and progress in addressing climate change through a rapid and effective shift away from our reliance on burning fossil fuels to power our homes, our businesses and our transport.

At the South Australian industry level, the importance and opportunities of a rapid transition away from fossil fuels is being widely acknowledged and planned for. In order for our state to achieve our net zero goals and demonstrate inspiring leadership and progress in climate action, there is also an important role for the South Australian community to play.

If South Australians can identify and harness the opportunities of cleaner ways of living, doing business, manufacturing, farming, and transporting goods and people, the immediate and ongoing benefits to our State population's health, economy, and resilience, especially in uncertain times, will be clear examples for other jurisdictions - just as our State's transition to a more renewably powered electricity grid has been commended and emulated globally over the last decade.

However, for members of our community to carry out this transition in a rapid and effective way, we need our Governments at all levels to understand the barriers and opportunities we face in carrying out this transition and to enact the necessary system changes which will pave the way for a healthier, safer and more prosperous life as residents of South Australia.

## THE IMPORTANCE OF EMISSIONS REDUCTION

The science is in. It demonstrates climate change. Humans are impacting our environment and also being affected by climatic changes.

Doing nothing is not an option. The consequences of living as we are and continuing to impact our environment as we have been, predict an increasingly bleak outcome. We each have multiple ways that we must contribute.

Reducing emissions matters because it is the right thing to do for the planet, for us, for our communities, for all living things, now and for generations to come.

# OUR KEY MESSAGES TO SA GOVERNMENT

Whilst our community can play a significant part in reducing our State's contribution to climate warming pollution, it is clear that the biggest impact will come from actions by both Industry and Government, particularly through legislation that mandates changes.

As such, to support the community's efforts in addressing climate warming pollution, we ask the SA Government to show our community clear emissions reduction planning and regular progress reports from the biggest emitters of our State, including actions to address emissions produced from fossil fuels that South Australia exports. By all players collaborating to do their bit to address the climate emergency, the South Australian community, industry and Government can make the transition in a more productive and sustainable way. We support legislative change as a key way to have impact in emissions reduction.

We would also like our Government to understand that the most effective way that we as a community can help our State reach net zero emissions is through Government system change to reduce the barriers and harness the opportunities that cleaner living options present to us. This will require our Government departments to work together on creating change that will have benefits to our community beyond just reducing emissions, but will have positive impact on our health and wellbeing, transport, agriculture, tourism and business sectors, and our economy as a whole if there is clear vision, communication and leadership for change.

The Panel recognises the need to raise community awareness that how we think and act individually has consequences in relation to climate change. It will be particularly important to bring every member of the community on the journey - even those who don't see emissions reduction as a priority. While carbon emissions are the focus of this discussion, we recognise the wider context of whole-of-life cycles, pollution in general, consumption processes and population pressures.

Out of the individual and localised decisions, we hope to empower the wider contexts of all levels of government, market forces, business, country and community to uphold common values including social equity, safety, health, social justice, nature and regenerative and circular sustainability. We specifically want to highlight equity and making transitions to lower emission living affordable for all.

THE BIG IDEAS

# THE BIG IDEAS WE NEED TO DISCUSS

Our footprint is too heavy. We have been living beyond our planet's current and future capacity to process and survive our impact.

Reaching our emissions reduction targets is going to need individuals, community, governments, and industry to pursue a lot of different solutions. We considered this problem in four principal domains: how we move, what we build, what we consume and how we power ourselves.

Under these domains, the Panel have identified 6 Big Ideas and a series of suggested actions which will help us realise these opportunities. These are:



## HOW WE MOVE

- ACCESSIBLE LOW EMISSION PUBLIC TRANSPORT
- ACCESSIBLE CLEAN PERSONAL TRANSPORT



## WHAT WE BUILD

• SUSTAINABILITY IN CONSTRUCTION AND INFRASTRUCTURE



## WHAT WE CONSUME

- CARBON EMISSIONS OF GOODS AND SERVICES
- AGRICULTURAL EMISSIONS



## HOW WE POWER OURSELVES

• COMMUNITY MICROGRIDS

# THE BIG IDEAS WE NEED TO DISCUSS - DETAILED

## HOW WE MOVE

## ACCESSIBLE LOW EMISSION PUBLIC TRANSPORT

## WHY WE NEED TO TALK ABOUT THIS

To get to net zero we need a higher percentage of people using public transport. We are stuck on this issue because of the lack of accessibility, comfortability and population density.

## WHAT WE NEED TO TALK ABOUT

Community discussions should begin with asking the public if they can take public transport at least once a week. Focus on inquiring if cost, reach and reliability are major impediments. Would people use it if it were free as it is currently for seniors.

Overriding discussion point - what would it take for you to use public transport?

Do we need smaller buses and more frequent trips. Do schools that have dedicated student only buses before and after school make you feel safer in sending your kids on public transport? Would a conductor on buses and trains make you feel more comfortable?

Clearly the public do not have a good enough understanding of how cheap and efficient public transport can be. The public don't know what options are available to them (e.g. cargo bikes) or have public transport impressions based on experiences from long ago.

We respect and understand that the conversation in rural areas is very different in terms of accessibility.

## SUMMARY OF SUGGESTED ACTIONS

To achieve accessible low emission public transport, the following three actions are suggested:



DECREASE THE COST OF USING PUBLIC TRANSPORT, WHILE INCREASING FUNDING FOR TRANSPORT AND TRANSPORT INFRASTRUCTURE.



INCENTIVISE PUBLIC TRANSPORT.



MAKE ALL TYPES OF PUBLIC TRANSPORT HYDROGEN OR ELECTRIC.



## SUGGESTED ACTION 1: DECREASE THE COST OF USING PUBLIC TRANSPORT, WHILE INCREASING FUNDING FOR TRANSPORT AND TRANSPORT INFRASTRUCTURE.

The priority things that would support this action are:

#### **GOVERNMENT ACTIONS**

Government should focus on improving accessibility, range and frequency of routes and modes of transport (bus to train to tram or vice versa, park and ride) in the metropolitan areas of SA and grow this capability in Regional SA.

#### COMMUNITY / NGO ACTIONS

Community and nongovernment organisations should encourage both the public and private sector employees to use public transport, through incentives in enterprise agreements.

#### INDIVIDUAL ACTIONS

Individuals need to shift - and choose public transport for their travels rather than cars.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Increasing funding for public transport (improve facilities/infrastructure/safety).	Improved education on the availability of public transport routes.	Increase understanding of available public transport routes.
Reduce funding for private transport (i.e., stop building freeways).	Identification of potential extensions of routes to new developments or regions that lack appropriate access.	Consider working from home.



## SUGGESTED ACTION 2: INCENTIVISE PUBLIC TRANSPORT USE.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Fund incentive schemes which make public transport more attractive.	Community supporting each other to feel safe on public transport.	Willingness to try - encourage more people.
Other things that would sup	oport this action are:	
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Fund/ deliver promotional campaign - marketing.	Workplaces to partner with government to encourage public transport use.	Increase understanding of available public transport routes.
Incentives for workplaces to reduce their Scope 3 emissions (commute).	Identification of potential extensions of routes to new developments or regions that lack appropriate access.	Consider working from home.
Public transport safety campaign (e.g. encouraging users to look out for each other) in the vein of 'slip slop slap', etc.	Helping people navigate the system when they are lost/confused, or when they are learning the system.	
Expand collection points for Public Transport and trial some "on call" systems (e.g. Mt Barker Ride on demand).		



# SUGGESTED ACTION 3: MAKE ALL TYPES OF PUBLIC TRANSPORT HYDROGEN OR ELECTRIC.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Funding incentives for trials of electric transport fleet in the private sector (demonstrate viability to the public).	Advocacy for electric transport for the benefit of electrification (i.e., quiet streets, no air pollution, improve electricity grid).	Demonstration of public demand for more accessible public and clean public transport.

#### Other things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Transition - retire old diesel or petrol fleets.	No other Community/NGO action identified by Panel.	Advocacy for electric transport for the benefit of electrification (i.e., quiet streets, no air pollution, improve electricity grid).
		Identification from individuals

via forum or feedback for opportunities for electrification or improved routes/infrastructure.

# **HOW WE MOVE** ACCESSIBLE CLEAN PERSONAL TRANSPORT

### WHY WE NEED TO TALK ABOUT THIS

For South Australia to meet its climate action goals, we need to fundamentally transform our transport system so everyone can get around our suburbs, cities, and regions easily, efficiently, and safely.

This requires a community-wide discussion about the range of solutions available to us to address our transport emissions problem. At the moment, we are not engaging enough in these solutions due to a series of barriers which differ depending on mode and personal circumstances.

As the community becomes more aware of the benefits of clean personal transport options, and begins to discuss the barriers and opportunities of uptake with their elected representatives, it can be expected that the political will to re-orient the transport system towards improving safety and accessibility for active and other clean transport options will be strengthened.

## WHAT WE NEED TO TALK ABOUT

Transport is an important sector for our community to focus on in order to guide our State's transition towards net-zero emissions.

Whilst climate warming emissions from most other sectors in our community are decreasing, emissions relating to transport are still showing moderate growth; now responsible for the largest contribution to our State's emissions at around 30%<sup>2</sup>, with around 10% of the State's emissions attributable to personal transport.<sup>3</sup>

It is important to note that in order to reach our net zero goals, personal vehicle ownership (including electric vehicles) will need to be halved<sup>4</sup>. This means a significant mode-shift towards active and public transport options needs to be supported. As public transport services will require lengthy and costly upgrades to service the required mode-shift, active transport presents a much quicker and cheaper strategy to achieve our net zero goals, and should become a key focus of our community's plans to move towards clean personal transport.

Over the last 10 years the range of clean personal transport options available to South Australians has rapidly expanded, and now includes a wide variety of efficient electric options:

- cars (micro, small passenger, SUV, utes and vans)
- two and three wheelers (motorbikes, scooters and rickshaws)
- light active transport (bikes, trikes and cargo bikes)
- micromobility (scooters, skates and segways)

These electric-powered/-assisted clean personal transport options add to existing active transport options including walking and riding.

4 GHG emission stats from https://www.environment.sa.gov.au/topics/climate-change/greenhouse-gas-emissions; https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1753-6405.2010.00621.x; https://www.climatechangeauthority.gov.au/sites/default/files/2021-03/2021Fact%20sheet%20-%20Transport.pdf; https://www.climatecouncil.org.au/resources/shifting-gear-the-path-to-cleaner-transport.pdf; https://www.climatecouncil.org.au/resources/shifting-gear-the-path-to-cleaner-tra

<sup>1. 2021</sup> CSIRO "Review of Progress to Achieving Targets Under Section 7 of the Climate Change and Greenhouse Emissions Reduction Act 2007"

https://cdn.environment.sa.gov.au/environment/docs/appendix\_c\_csiro\_section\_7\_report\_2021.pdf

<sup>2.</sup> https://www.environment.sa.gov.au/topics/climate-change/greenhouse-gas-emissions

<sup>3.</sup> Motor vehicle use stats from: https://www.abs.gov.au/statistics/industry/tourism-and-transport/survey-motor-vehicle-use-australia/latest-release#media-releases

# **HOW WE MOVE** ACCESSIBLE CLEAN PERSONAL TRANSPORT

More than just reducing transport related emissions, uptake of clean personal transport options provides a vast array of co-benefits to our community including:

- Respiratory, cardiovascular<sup>5</sup> and mental health and wellbeing benefits of reduced air and noise pollution, more opportunities to 'be active', and more opportunities for social interactions with other community members.
- Financial benefits to households from reduced reliance on fossil fuels and costs associated with vehicle ownership and servicing (unlocking income to spend in the local economy, and on other efficient electric purchases).
- Financial benefits to State and Local Governments from reduced road congestion and wear and tear on transport infrastructure.
- Financial benefits to regional communities from improved active transport network connections, and EV charging infrastructure, enticing tourists to spend more time and money in regional/remote areas, whilst also servicing the local community.
- Improved access and participation of the increasing number of non-driving community members (eg. older people, people with disabilities and children).
- Community energy resilience building and grid stabilisation from options like vehicle-to-load and vehicle-to-grid capability, especially important in extreme weather, fire danger situations, and remote areas.
- Increased energy independence by better utilisation of SA's abundant and cheap renewable energy supply.

However, despite the increasing availability, the range of versatile options, and the potential to significantly reduce emissions (amongst many other co-benefits), uptake of these clean personal transport options has, to date, not been wide-spread.

In order to increase uptake of these innovative solutions to transport emissions, the community needs to identify the barriers and opportunities for uptake, and call on decision makers to implement consistent system-level change to improve access to clean personal transport options.

Improving active and clean personal transport uptake must be a key focus area for reducing one of our State's largest and still growing sources of emissions; one where every member of our community can participate, and immediate health, financial and environmental co-benefits will be experienced community-wide.



### **BARRIERS & OPPORTUNITIES FOR INCREASED ACTIVE TRANSPORT**

#### Road safety

This key barrier can be improved through prescribing safer speed limits especially on local streets , as well as through driver education and enforcing bike safety rules.

#### Versatility and viability

While people are concerned about what they can carry and what trips can be undertaken by walking or riding, different vehicles such as e-bikes, cargo bikes, and even electric cargo bikes can provide a suitable alternative for a variety of different trips, passengers, conditions and terrains.

#### Accessibility and network connection

People are concerned about where they can go safely by bike or on foot. Because active transport has not been an integral part of transport planning this has resulted in confusing, disconnected networks across the SA transport system, including a lack of connectivity with public transit. Some specific measures to quickly and relatively cheaply improve the active transport network include: reinforcing existing school and commuter walking/riding routes with safe and clearly visible road crossings, improving connections and density of the network of separated cycle lanes/paths (see SA's Bikedirect network ), providing for carriage of micromobility options on buses, trains and trams, and safe clear entrance, egress and storage of micromobility options at public transport stations.

#### **Community perception**

Many South Australians have a negative perception of bike riders; they approach the issue from the perspective of a car driver, rather than viewing bike riders as part of a connected system of road users. This issue can be easily addressed through a "we are bike riders, we are humans too or we are someone's loved one family member" public awareness campaign, highlighting the diversity of the increasing bike riding community on our roads, and highlighting that increased active transport uptake frees up the roads and carparks for those who need them (i.e. every bike on the road is one less cars on the road).





### **BARRIERS & OPPORTUNITIES FOR ELECTRIC VEHICLE UPTAKE**

#### Access to and compatibility of charging infrastructure

With the current regulatory environment, many different charging types complicate consumption decision which slows uptake. Moving towards an accepted standard charging technology would assist with availability and also maintenance issues.

There is also a perception of there being too limited a network of charging stations, however 98% of charging stations are less than 200km apart, and the interactive map from RAA shows how widespread the network of charging stations now is.

There can also be issues with retrofitting existing homes with EV charging infrastructure, particularly for renters or those in strata/community titled units. However, these could be overcome through community collaboration, incentive schemes for landlords, and change to regulations governing energy sharing.

#### **Financial barriers**

Electric vehicles can be more expensive than traditional internal combustion engine vehicles. However, financial support in the form of low/no-interest loans and novated lease options are becoming increasingly available for SA residents. Also, improved shared, active and public transport options will assist households to reduce their reliance on driving, and therefore reduce the costs associated with multiple vehicle ownership.

#### EV availability

As interest increases, South Australians are adding to the global demand for EVs and with supply chains already stretched, South Australian customers are waiting over 6 months to take ownership of their new vehicles. Moreover, the selection of EV models available to the South Australian market is not keeping pace with what is being offered to other jurisdictions or countries as we have lenient fuel efficiency legislation allowing car companies to continue to sell their less efficient options in our market. This can be addressed through improved fuel efficiency standards which will ensure car companies provide our community with a broader range of clean transport options. There is currently a small second-hand market, and South Australia does not yet have a bulk buy scheme in operation. As general demand for EVs increases, the 2nd hand market for EVs in South Australia should become more widespread, along with access to bulk buy schemes.

#### 'Range anxiety'

Many in the community need to drive long distances and are concerned that EVs have a "range problem". Whilst the majority of trips taken in private vehicles is significantly less than the range provided by current EV options, for those needing to drive long distances (>100km daily), newer models will increasingly provide a longer range, possibly even surpassing many petrol/diesel vehicles. Moreover, the network of public fast charging infrastructure is rapidly expanding, along with EV owner's capacity to charge at their own home or workplace.



## SUMMARY OF SUGGESTED ACTIONS

To achieve accessible clean personal transport, the following three actions are suggested:

PRIORITISE ACTIVE TRANSPORT UPTAKE BY ADDRESSING SAFETY AND ACCESS BARRIERS IN ORDER TO REACH OUR NET ZERO GOALS.



INCREASE UPTAKE OF CLEAN ELECTRIC VEHICLES.



IMPROVED CONNECTIONS BETWEEN ACTIVE AND PUBLIC TRANSPORT TO ENHANCE THE UPTAKE OF BOTH OPTIONS.





# SUGGESTED ACTION 4: PRIORITISE ACTIVE TRANSPORT UPTAKE BY ADDRESSING SAFETY AND ACCESS BARRIERS IN ORDER TO REACH OUR NET ZERO GOALS.

The priority things that would support this action are:

#### **GOVERNMENT ACTIONS**

Improve safety for active transport users by prescribing safer speeds on local streets, increasing investment in safer cycling infrastructure , and implementing stronger active transport protection laws.

#### **COMMUNITY / NGO ACTIONS**

Improve access to, and enhance knowledge of new clean transport ideas and products (eg. organising electric bike pop-up test rides, subscription, hire, try-beforeyou-buy options, and low/nointerest loans for purchase).

Demonstrating cost-benefit analysis.

#### INDIVIDUAL ACTIONS

Advocate for better active transport by:

- Joining an active
  transport advocacy group.
- Talking to community about the benefits of active transport and encourage them to walk or ride too.
- Encourage workplaces and regular trip destinations to incorporate bike/micromobility storage and end-of-trip facilities.

Raise the importance with community and decision makers of active transport to cheaply, quickly and effectively take climate action at the community level ('constructive hope' especially for the younger generations).

Improve financial accessibility to the range of car- replacing bikes (eg. electric cargo bikes) for example subsidies for e-bikes, encourage bike loaning schemes ("try before you buy") and businesses who provide subscription models.



GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Marketing campaign to spread the message regarding the positive health, economic and environmental impacts of cycling, and dispelling myths regarding issues with cycling.	Facilitate better bicycle storage at trip destinations (e.g. workplaces, schools, shopping centres, restaurants, and event venues).	Ride bikes more often and avoid driving.
	Organise walking and cycling "school buses" to allow kids to safely get to school.	Own fewer cars or be car- free.

# **HOW WE MOVE** ACCESSIBLE CLEAN PERSONAL TRANSPORT

## SUGGESTED ACTION 5: INCREASE UPTAKE OF CLEAN ELECTRIC VEHICLES.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Reduce costs of purchasing and running of EVs while transitioning away from fossil fuel subsidies, making hydrogen & EVs the obvious choice.	Encourage the use of car sharing services with EV focus.	Design and build properties with EV charging capabilities. Ask local councils to provide charging facilities. Encourage councils to lead with their own EV fleets.
Government needs to support rollout of consistent (i.e. same charger types) and extensive EV charging infrastructure, both on public roads and on private properties.		Early adopters - share information about new models and ideas to improve community understanding and uptake.
Other things that would sup	oport this action are:	
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Implement strict emission and air quality standards and set a target date for stop selling fossil fuel vehicles (by 2030).	Improve access to and enhance knowledge about new EV models and ideas through bulk buy initiatives - for example, organise 2nd hand markets, pop-up test drive events, subscription services, and try-before-you-	No extra actions identified by Panel.

Implement bulk buy initiatives - especially for the second hand market.



# SUGGESTED ACTION 6: IMPROVED CONNECTIONS BETWEEN ACTIVE AND PUBLIC TRANSPORT TO ENHANCE THE UPTAKE OF BOTH OPTIONS.

#### The priority things that would support this action are:

#### **GOVERNMENT ACTIONS**

Allow and enhance options for carrying bikes, e-scooters, e-skateboards on trams, trains and buses and remove charges for carrying micromobility options on board.

#### COMMUNITY / NGO ACTIONS

Promote active and public transport as the preferred options to travel to events for financial, health and environmental reasons, and provide secure accessible parking and end-of-trip facilities.

#### INDIVIDUAL ACTIONS

Raise the importance of improved connections between active and public transport with decision makers to enhance uptake of both for financial, health and environmental reasons.

Prioritise active and public transport on roads by removing much of the onroad parking and having dedicated bus/bike lanes. This will provide safer access between, to and by active and public transit options - (e.g. there is an increased road safety risk when buses and bicycles struggle to get around cars that are parked on street).

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Provide more pedestrian only areas like Rundle Mall.	No extra Community/NGO actions identified by Panel.	No extra Individual actions identified by Panel.



## WHY WE NEED TO TALK ABOUT THIS

Our construction industry is responsible for a significant proportion of the greenhouse gas emissions in our state. Historically it has been challenging to reduce the emissions in this sector as industry have had significant influence over Government regulation and there has been significant pushback on increasing energy efficiency requirements in the National Construction Code and difficulties in enforcing the codes when they are adopted.

Our buildings also have a slow turnover rate - they have a lifespan of 50 or more years and so upgrading the energy efficiency via full building replacement alone is not a viable pathway to net zero. In a market where housing affordability is a challenge and general construction costs are high, there is also a perception that design for high energy efficiency is an unaffordable luxury - in new or existing buildings. Progress towards more energy efficient buildings has also been slowed by materials and skilled/knowledgeable labour shortages.

## WHAT WE NEED TO TALK ABOUT

As a community we need to discuss the capacity to achieve net zero in our homes and other inhabited buildings. Working towards this directly affects the lives of community members (with some challenges), while contributing to emissions reduction across the State, country and globally. Important opportunities to consider within this change are increased comfort, increased health benefits and lifetime affordability.

Combined with regulatory and fiscal pressure, consumer pressure could sway the market towards net zero, sustainable and low carbon construction practices.

From a community perspective, the key issues are:

- Understanding, recognising and valuing quality design for low emissions.
- Material selection and transparency of embodied carbon.
- Affordability of low carbon building.
- Skills and workforce development.





## WHAT WE BUILD SUSTAINABILITY IN CONSTRUCTION AND INFRASTRUCTURE

## UNDERSTANDING, RECOGNISING AND VALUING DESIGN FOR LOW EMISSIONS.

Community and industry professionals/trades need to be educated to understand the principles and then value the benefits of low emissions, high performance building systems. This education is important for consumers to be able to make informed choices and apply consumer demand, as well as to ensure that they "get what they pay for" when they are buying or building.

Industry professionals and trades need to understand the principles and standards required for low emissions building as they are the ones who are entrusted with providing advice and/or with creating our buildings.

## MATERIAL SELECTION: TRANSPARENCY OF EMBODIED CARBON AND EMISSION CREATED DURING MANUFACTURE.

A significant contributor to carbon emissions from buildings is the manufacturing process of materials. Many materials are manufactured in other states and countries, using fossil fuels, and subsequently being imported into South Australia, resulting in high embodied carbon (the amount of carbon that is emitted to manufacture and then transport the material to the building site). It is also often difficult to gain accurate information on the emissions for different materials.

There are several opportunities to reduce the impact from embodied carbon in materials, including:

- Localisation and greening of manufacturing processes.
- Regulation of industry, including increases in building code standards and better enforcement of compliance.
- Transparency in embodied carbon of materials, lifetime emissions calculator.
- Retrofitting of existing buildings.
- Education of industry professionals for design and selection of low carbon materials.
- Broadscale education of the community.

## AFFORDABILITY OF LOW CARBON BUILDING.

Where the homeowner, designer and builder can work together in the early stage of design and specification and rating, all future owners can avoid the long-term lifetime costs of energy inefficient buildings to achieve better outcomes for occupants.

Some solutions can include:

- Designing a smaller building.
- Increasing demand for low carbon materials to improve economies of scale.
- Finance products including lower interest rates or grants to include low emissions features.
- Transparency in building sustainability features to enable comparison and value based of these features (sustainability features have been shown to increase the value of a property).
- Efficiencies such as pre-fabrication.



### SKILLS AND THE WORKFORCE.

The three above issues all rely on the ready supply of a skilled workforce that understands sustainable and low-carbon building materials and high performance building systems.

They also rely on a well-educated public, who understand the opportunities that their personal choices have for low carbon building. Combined with regulatory and fiscal pressure, this educated consumer pressure could sway the market towards net zero, sustainable and low carbon construction practices.

## SUMMARY OF SUGGESTED ACTIONS

To achieve sustainability in construction and infrastructure, the following three actions are suggested:



CONSTANTLY IMPROVE LEGISLATION AND REGULATION IN THE BUILDING AND PLANNING INDUSTRIES TO INCORPORATE THE PRINCIPLES OF SUSTAINABILITY AND NET ZERO EMISSIONS.

PROVIDE EXTENSIVE TRAINING IN NET ZERO ENERGY DESIGN, SPECIFICATION AND CONSTRUCTION WITHIN THE BUILDING INDUSTRY.



RAISE CONSUMER AWARENESS, UNDERSTANDING AND EXPECTATIONS FOR ENERGY EFFICIENCY AND SUSTAINABILITY IN THE BUILT ENVIRONMENT.





## SUGGESTED ACTION 7: CONSTANTLY IMPROVE LEGISLATION AND REGULATION IN THE BUILDING AND PLANNING INDUSTRIES TO INCORPORATE THE PRINCIPLES OF SUSTAINABILITY AND NET ZERO EMISSIONS.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Develop systems that decouple code development and regulatory implementation from the influence of industry bodies to maximise opportunities for Net Zero Energy-ready buildings.	Bring Planners, Building Inspectors and Engineers together to determine best and most economic ways to present "Green" building to the proponent of every construction.	Demand that green building information products be provided by developers, builders and real estate agents - including lifetime emissions and cost consequences of bad design.
Other things that would support this action are:		
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS

Have a state government building authority to improve code enforcement or resource and strengthen Council capacity to police code compliance.

Implement a Green Builder accreditation code with rewards for the good and naming and shaming for the bad. Unions and employers demand green building training included in all training, apprenticeship, building license courses etc and validation of knowledge.

Awareness and education to demand/expect more.



# SUGGESTED ACTION 8: PROVIDE EXTENSIVE TRAINING IN NET ZERO ENERGY DESIGN, SPECIFICATION AND CONSTRUCTION WITHIN THE BUILDING INDUSTRY.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Provide the forum to ensure the key individuals in building design and execution come together to map the way forward to Low Carbon and sustainable developments that leads to development of legislation via regulation.	Unions and employers demand green building training included in all training, apprenticeship, building license courses etc and validation of knowledge.	No individual actions recommended by Panel.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Provide skills to aim for above compliance and to meet consumers to meet their energy expectation.	No extra Community/NGO actions recommended by Panel.	No individual actions recommended by Panel.



# SUGGESTED ACTION 9: RAISE CONSUMER AWARENESS, UNDERSTANDING AND EXPECTATIONS FOR ENERGY EFFICIENCY AND SUSTAINABILITY IN THE BUILT ENVIRONMENT.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Introduce and enforce mandatory disclosure at point of sale and lease. Market incentivised to incorporate energy ratings into real estate transactions.	Create and market new carbon neutral and net zero products / options for infrastructure and materials.	Homeowners value energy rating disclosure as both vendor and purchaser (or tenant) The ability for individuals to recognise the long term cost for the building. So they can make good choices.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Fund a Sustainable / Technology Shopping TV Channel with a program to highlight best practice low emissions building practices (along with all other consumer product info) to help consumers understand wise decision making.	No extra Community / NGO actions recommended by Panel.	To research a range of infrastructure and material options that would make the building they own more carbon neutral. Information not only for emissions but to reduce energy costs.



### WHAT WE CONSUME

## UNDERSTANDING CARBON EMISSIONS FOR GOODS AND SERVICES

## WHY WE NEED TO TALK ABOUT THIS

To move towards net zero, it is important for all people (producers, consumers) to be able to understand the carbon impact of the goods & services they are buying, and then be able to choose to buy goods and services with a lower emission impact.

The ability for consumers to access information on the life cycle of goods and services is currently challenging and inconvenient and thus there is limited action in this space.

There is a need for community wide discussion in order to ascertain what is needed from a consumer and industry perspective to move forward in this area. Community trust in current claims from industry is low.

## WHAT WE NEED TO TALK ABOUT

We want to enable the calculation of a whole of life-cycle carbon cost, applied to all goods and services to make everyone aware of and accountable for the impact of the products they buy. We need to calculate it, standardise it and publish it. This will drive industry change for reducing emissions. Once we understand it, we anticipate the emission impact of goods and services could then be reflected in their costs.

Total lifecycle emissions of products are very hard to quantify and measure. Generating the ability to take action to mitigate the carbon cost of products is very complex. Accountability is an issue and requires collaboration with everyone in the supply chain in order to empower consumers to make informed choices when purchasing goods and services.

Community discussion should focus on the labelling and indicators that should be implemented in order to increase knowledge. For example, does the community wish to see labelling that shows CO2 emissions of products in the form of a star rating or have access to QR codes with additional information on a (government?) database.

Broad focus areas where action could be taken could include areas of perceived high emissions and involving consumer choice, such as:

- Air travel
- manufacturing of motor vehicles
- food and drinks products e.g. meat and alcohol (Drakes, Foodland, Haighs, Coopers, etc. from SA)
- clothing and fashion (SA wool, Rossi boots, etc.)
- construction materials (local quarries, forestry, etc.)

The focus should first be on South Australian made goods and services, then address national and then international.



## WHAT WE CONSUME UNDERSTANDING CARBON EMISSIONS OF GOODS AND SERVICES

## SUMMARY OF SUGGESTED ACTIONS

To achieve understanding the carbon emissions of goods and services, the following three actions are suggested:



ENCOURAGE ORGANISATIONS TO PRODUCE LOW-CARBON EMISSION GOODS AND SERVICES.



ENCOURAGE CONSUMERS TO PURCHASE LOW-CARBON EMISSION PRODUCTS/SERVICES.





# SUGGESTED ACTION 10: TRIAL REGULATION OF EMISSIONS OF GOODS AND SERVICES PRODUCED AND SUPPLIED.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Consistent, transparent, government-set method to measure and calculate carbon emissions captured by each good/service.	Provide clear, accurate information to regulatory body and consumers.	Consumers should seek out the certification on the goods/service.

#### Other things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Provide information on how to read results to enable consumers to understand the emission cost of their purchase.	Promotion of information through packaging and promotional material.	Educate selves on the information provided.

Ensure the information provided is easily accessible and easy to understand.



# SUGGESTED ACTION 11: ENCOURAGE ORGANISATIONS TO PRODUCE LOW-CARBON EMISSION GOODS AND SERVICES.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Subsidise local businesses which prioritise local supply, manufacturing, etc.	Apply for appropriate subsidies/grants.	To prioritise manufacturing, processes, transportation etc. which are low-carbon.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Incentives for organisations to do best practice.	Retail sector and industry buy-in.	No extra individual actions identified by Panel.
Subsidise low-emission small businesses who would otherwise not be able to afford production.	Apply for subsidies.	



# SUGGESTED ACTION 12: ENCOURAGE CONSUMERS TO PURCHASE LOW-CARBON EMISSION PRODUCTS/SERVICES.

#### The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Subsidise low-carbon emission products to offset consumer cost.	Private sector buy-in to make available and accessible.	To prioritise low-carbon goods and services over similar alternatives.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Subsidise low-carbon emission product branding, to create a niche market for climate conscious consumers wanting to purchase low emission products.	Private businesses from all segments of the supply chain, to trial low carbon emission product branding, and survey the market's response.	Purchase low carbon emission branded products, to encourage momentum towards low emission consumerism.

## WHAT WE CONSUME Agricultural emissions - what we grow, produce and eat

## WHY WE NEED TO TALK ABOUT THIS

Agriculture is a big part of our emissions and there is a great opportunity to have a real impact on reducing emissions by addressing change in this sector.

We know that methane is a major emitter. Our food systems are also opaque - agriculture is at the supermarket for most people. People make decisions everyday about what they eat, and a conversation about agricultural emissions could influence consumer choices.

We know this is an emotive and complex issue - compounding it is generational attitudes, practices of agriculture, family ties with land, production systems and ways of working. We want to ensure a conversation about agriculture demonstrates the value we have for our producers in SA.

We need to see a shift towards adopting new knowledge, advancing practices and also see consumers and producers shift together. For consumers, we need to see shifts in what we consume and what we demand. Supporting the community to start growing their own food, will enable us to see things differently.

On the flipside, we want to see food producers shift to more sustainable, regenerative production which continues to value our lands and waters.

## WHAT WE NEED TO TALK ABOUT

At an industry level we need to see conversations about reductions in sources of emissions such as methane produced via ruminants (seaweed diet for cattle) and emissions from machinery being reduced through technological advances.

At a community level, we need to better understand the water and carbon cycle, and soil carbon emissions from tillage, land clearing, desertification. We need to address food waste - optimising solutions for what we grow.

In talking about this we need to recognise the revolutionary way in which farming has evolved - and the sustainable ways the industry is developing. Its exciting to see innovation being adopted on our farms and in food production.

A statewide conversation about agricultural emissions should advance knowledge and education and address fake news. Our discussions need to be respectful of the complexity of this issue, the emotion attached and be built on values and cultural-based consumption. What we eat has a direct link to our personal health and wellbeing.

Change in this sector will require a huge investment of time, energy and resources of farmers - we know that many of the solutions are expensive for producers and the costs to individuals of quality local food is high. As a consequence, we need to support adaptation.

We also need to address the supermarket duopoly - which drives behaviour in what we buy and eat. 33



## WHAT WE CONSUME AGRICULTURAL EMISSIONS - WHAT WE GROW, PRODUCE & EAT

## SUMMARY OF SUGGESTED ACTIONS

To achieve emission reductions in Agriculture, the following three actions are suggested:



OPTIMISING PRODUCTION - USING EVERYTHING WE GROW.



INCENTIVISING / SUPPORTING FARMERS AND AGRICULTURAL BUSINESS TO TRANSITION TO LOWER CARBON PRACTICES.



INFLUENCE CONSUMER DECISION MAKING.





## SUGGESTED ACTION 13: OPTIMISING PRODUCTION - USING EVERYTHING WE GROW.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Assistance in supporting farmers to take 'waste' products and use them - circular economy / govt can play a way to help support this.	Find ways to use unwanted produce - ie foodbank model and highlighting what else could be done.	Influence others / make choises about what you do and don't accept (ie twisted carrots, blemished apples).
Other things that would sup	port this action are:	
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Supermarket acceptance criteria (mandate).	Shareholders demanding more from supermarket chains.	Purchase low carbon emission branded products, to encourage momentum towards low emission consumerism.
Incentives to reduce food waste.	Food waste public education.	Composting and vermicomposting.
Loosen regulation for small producers - on farm processing.	Across Govt, NGO's and individuals incentivise, teach and actively move to using compost instead of commercial fertilisers in all forms of broadacre and horticulture farming to reduce climate effects and improve sustainability.	
	Establish a circular economy using organic wastes at all stages of farm management.	

35



# SUGGESTED ACTION 14: INCENTIVISING / SUPPORTING FARMERS AND AGRICULTURAL BUSINESS TO TRANSITION TO LOWER CARBON PRACTICES.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Incentivise farmers that take action to reduce carbon footprint of their farm (increasing soil carbon, increasing green coverage, use of renewables, reduction of diesel use).	Farmer groups (Landcare groups, MLA, AWB, GRDC) Supporting / information sharing for change.	Consumers willing to pay more for a higher quality or lower carbon product. farmers will be willing to change their practices is there was a financial benefit for it.
Other things that would sup	port this action are:	
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Regenerative farming education and training to the workforce and industry.	No actions identified by Panel.	Reward local food systems.



## SUGGESTED ACTION 15: CONSUMER DECISION MAKING.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Incentivise lower carbon products - equitable costing in which low carbon products are cheaper - support for purchasing the better choice.	Point of sale - Supermarkets informing customers on the emissions of products.	Choose lower carbon products and diets such as plant-based diets, local produce and less highly processed products.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Public information campaigns around the total carbon cost of foods - see Big Idea #4.	Education to consumers - sustainability indices.	Support locally slaughtered meat products - and small scale abattoirs.
	Empowering consumers to use their purchasing power and their power as individuals to make change.	



### WHY WE NEED TO TALK ABOUT THIS

Whilst micro-grids are not a significant emission reduction action, they are effective at generating the community momentum for future actions. They help to mobilise and shift communities, opening the door to other ideas and projects - such as electrification and degasification.

Microgrids put communities and people closer to energy sources which encourages the community to care about the impact and outcomes.

They also generate a sense of agency enabling communities to get involved and they start a discussion about what next - i.e., what can the community do next.

Microgrids offer energy security and climate resilience in the event of power failures, bushfires, flooding, war and other extreme scenarios that may threaten community safety or services (e.g., hospitals, schools, aged care etc.).

There is a lack of energy literacy which disenfranchises people from discussions or adoption, but we know that the establishment of microgrids is an innovation we need and it can provide new jobs and careers for a 21st century workforce.

## WHAT WE NEED TO TALK ABOUT

A microgrid can be thought of as a small subset of the electricity grid that provides energy generation and storage at a local level. They can incorporate renewable energy generation as well as battery energy storage.

Communities have the opportunity to use their collective bargaining power to maximise the usage of renewable energy, decentralise supply from large corporations, and have a say in where their electricity comes from, and how it is used and shared.

The discussion needs to provide a definition of what microgrids are, what opportunities are available currently, what is required to change now (i.e, legislation, retailer regulations).

We also need to keep focussed on the health, safety and financial benefits of moving away from burning gas in the home.



## SUMMARY OF SUGGESTED ACTIONS

To achieve community microgrids, the following three actions are suggested:





USE PRICE INCENTIVES TO ENABLE ADOPTION.



WORKFORCE DEVELOPMENT - INCENTIVISE NEW, BEST PRACTICE, FUND EVIDENCE-BASED TRIALS / PILOTS, EDUCATE AND TRAIN A NEW SECTOR.





# SUGGESTED ACTION 16: CHANGE PLANNING AND ELECTRICAL LAWS ON STATE AND FEDERAL LEVEL TO ENABLE RESIDENTIAL, COMMERCIAL AND INSTITUTIONAL IN SA.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Legislative reform.	Community pressure / education of options.	Demand for microgrids from public.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Review of privatisation of electrical system - poles and wires etcetera.	Input into parliamentary enquiry.	Respond to Have your Say SA.



## SUGGESTED ACTION 17: USE PRICE INCENTIVES TO ENABLE ADOPTION

- THOSE WITH SOLAR PANELS FORM A LOCAL GRID.
- THOSE WITHOUT ACCESS TO SOLAR FORM A LARGE BUYING GROUP FOR GREEN ENERGY.

The priority things that would support this action are:

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Incentivise microgrid formation - support early adopters.	Create a media interest to promote this as a useful idea.	Willingness to electrify - replace gas with electricity.
Other things that would support this action are:		
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS

Government subsidised microgrids of both types to illustrate the benefits to SA residents.

Early adopters - Small business commissioner to promote.

Early adopter(s) to take lead and encourage followers through publications newspapers etc - TV documentary / "How SA did it" - You-Tube - support from local academics - known experts.



 SUGGESTED ACTION 18: WORKFORCE DEVELOPMENT - INCENTIVISE NEW, BEST PRACTICE, FUND EVIDENCE BASED TRIALS / PILOTS, EDUCATE AND TRAIN A NEW SECTOR.

The priority things that would support this action are:

#### **GOVERNMENT ACTIONS**

Free / subsidised trade courses (apprenticeships) at TAFE - similar to trade apprenticeship for hairdressers straight from school. Subsidies to businesses to fund training opportunities for high school students, to assist with their transition into the workforce.

#### COMMUNITY / NGO ACTIONS

Community advocacy and encouragement to join the workforce and trust in the promise of long term gainful employment.

"not fashionable...it's on trend".

#### INDIVIDUAL ACTIONS

Trust in the vision for individual full electric homes, which sustain a community operative microgrid. Everyone shares the same beliefs and values, and so trusts and supports one another in achieving zero emissions.

GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Incentivise SA companies to produce a pilot project - microgrid.	Specialist businesses to create a workforce to support Microgrid construction end-to- end with warranties.	Incentivise SA companies to produce a pilot project - microgrid.



# SUGGESTED ACTION 17: CHANGE PLANNING AND ELECTRICAL LAWS ON STATE AND FEDERAL LEVEL TO ENABLE RESIDENTIAL, COMMERCIAL AND INSTITUTIONAL IN SA.

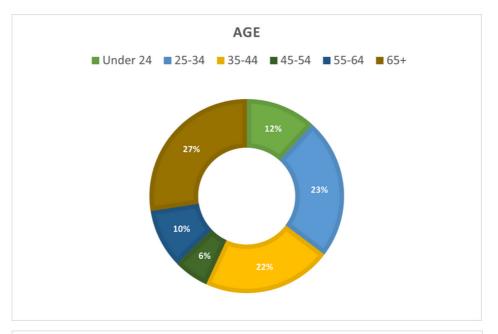
The priority things that would support this action are:

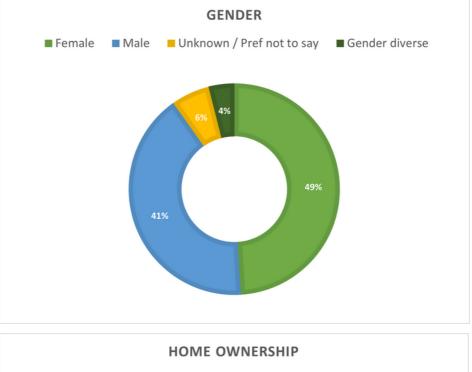
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Legislative reform.	Community pressure / education of options.	Demand for microgrids from public.

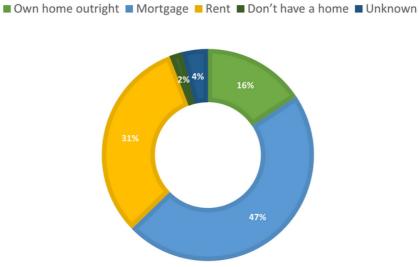
GOVERNMENT ACTIONS	COMMUNITY / NGO ACTIONS	INDIVIDUAL ACTIONS
Review of privatisation of electrical system - poles and wires etcetera.	Input into parliamentary enquiry.	Respond to Have your Say SA.

ATTACHMENT A COMMUNITY CLIMATE PANEL DEMOGRAPHICS

# ATTACHMENT A PANEL DEMOGRAPHICS







# ATTACHMENT A PANEL DEMOGRAPHICS

