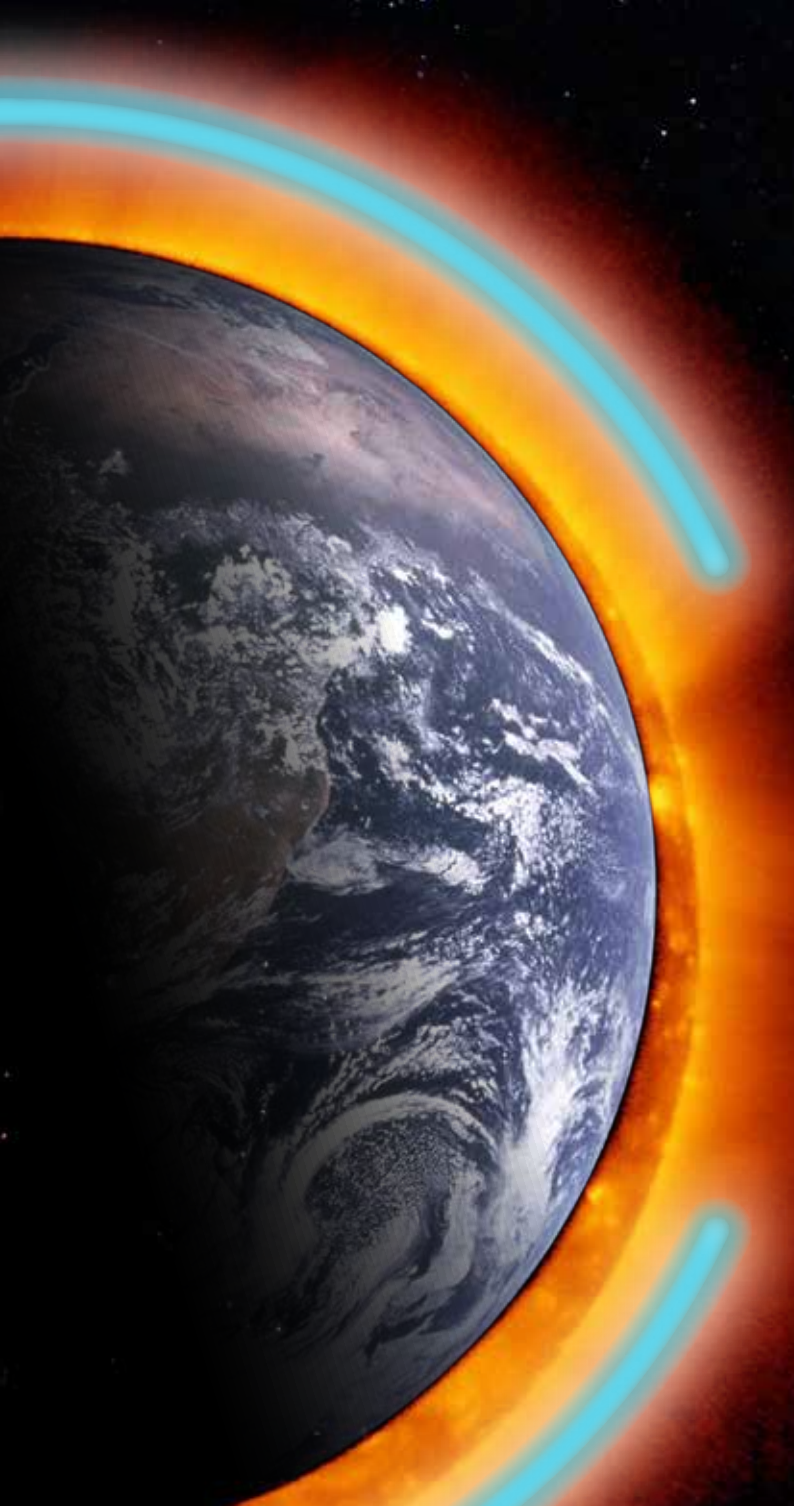


# CLIMATE EMERGENCY ACTION PLAN

2022–2030



# Message from the Mayor

*It fills me with pride to be the Mayor of the first Council in South Australia to declare a Climate Emergency and to demonstrate its commitment to a safer, more resilient future through this Climate Emergency Action Plan (CEAP). Council's aim is to support our community as we seek to reduce our emissions and continue to adapt to our changing climate.*

*Our community of Gawler and Council take pride in protecting and nurturing our way of life, our businesses, our economy and our local environment. Climate change presents the biggest threat to current and future generations, and solutions will only be successful when communities, businesses and all levels of Government collaborate and take responsibility for their contribution to climate change.*

*In 2018, the Intergovernmental Panel on Climate Change released a Special Report<sup>[1]</sup> on constraining climate change to within a 1.5 degree Celsius increase compared with pre-industrial age levels. Our young people have made it abundantly clear that urgent action is required to respond to what they have identified as a climate emergency, so that their own and future generations can live in a safe climate and healthy environment.*


*This report acknowledges the high level scientific concerns, and small window of opportunity for action to prevent dangerous climate change that would have major impacts across all aspects of our daily life.*

*Protection of the health and well-being of our current and future communities is a high priority for Council in the development of this Climate Emergency Action Plan, which provides a pathway towards a better future where Council will:*

- *Recognise the needs and aspirations of emerging and future generations;*
- *Lead by example by reducing its emissions and improving its preparedness;*
- *Support our community of Gawler to reduce emissions and adapt to climate change impacts, and;*
- *Communicate, engage and collaborate with all stakeholders on solutions to reduce emissions, adapt to the impacts of climate change and advocate for policies and reforms as necessary.*

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<sup>1</sup> IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. Accessible: <https://www.ipcc.ch/sr15/chapter/spm/>



*The completion of this plan is just one of many steps in a much longer journey. We have many champions within our community who are committed to tackling climate change as a national emergency.*

*Some of these community members have participated as members of our CEAP Working Group to prepare this Plan and for this we express our sincere gratitude.*

*I look forward to working in partnership with our community of Gawler as we respond to the climate emergency for a better future.*



**Karen Redman**  
Mayor

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# Executive summary

The Climate Emergency Action Plan is an aspirational plan. Whilst best endeavours will be made, some outcomes will be beyond control of Council. Some of the actions and initiatives within the plan have costs associated with their implementation.

Whilst all efforts will be taken to estimate project costs, decisions will be determined by the project business case, project timing and ultimately by Council consideration and resolution.

We recognise that the town of Gawler is located on Kaurna land, and we acknowledge their ownership and traditional custodianship of the land for more than 60,000 years, and we understand the spiritual significance to their elders, past and present. We also acknowledge that further work and collaboration is required to incorporate traditional land caring practices and demonstrate respect for the land.

The Town of Gawler *Climate Emergency Action Plan* (CEAP) has been prepared in response to the scientific alarms being sounded all over the world, warning us that our failure to act will result in irreparable damage and an unsustainable pathway for emerging and future generations. Our climate is already changing rapidly. The *Intergovernmental Panel on Climate Change 1.5 Degree Report* has identified that the time for action to secure a safe climate future is now – our window of opportunity is rapidly closing.

In taking action to address climate change, there are some very encouraging opportunities:

- The technology to dramatically reduce emissions is already available and proven;
- Applying energy efficient and low carbon technologies delivers considerable cost savings. The reduction of upfront cost barriers will accelerate action;
- Renewable electricity is now the cheapest form of electricity to produce. Ensuring that the reduced costs of renewable electricity are available to consumers will accelerate the transition to near 100% renewable electricity;
- Electric vehicles provide a major opportunity to reduce emissions in the transport sector and are likely to lead to cost savings over time, and;
- Greening the Town of Gawler and supporting *Water Sensitive Urban Design* (WSUD) will result in Gawler being cooler during the summer months with support for biodiversity and improved amenity.

We acknowledge that we have an obligation to provide emerging and future generations a safer climate. For this reason, the CEAP incorporates a partnership and commitment to our young people and future generations as well as measures of accountability to ensure that this plan is enacted.

The Town of Gawler Council understands that the health and wellbeing of its citizens is directly linked to rapid action on climate change and is paramount for the future of Gawler. Council declared a *Climate Emergency* in January 2019 and was the first South Australian Council to do so, committing to prepare this *Climate Emergency Action Plan*. Since then, 15 other South Australian councils have declared a climate emergency.

The CEAP outlines the positive future scenario that we are seeking and describes the key areas of action for Council operations, supporting and engaging with communities, business and governments and advocating for reforms where necessary.

Priority areas are to:

- Achieve zero net emissions for Council operations and empower communities towards achieving net zero emissions by 2030;
- Transition to 100% renewable electricity use;
- Transition to purchasing only electric vehicles by 2030;
- Phase out Council use of piped natural gas and LP cylinder gas by 2025 as far as possible;
- Eliminate single use plastics and strive for a circular economy by 2030, and;
- Support community resilience to climate change and the greening of Gawler to 30% canopy cover.



Actions are focussed on:

- **Reducing emissions**, including through energy efficiency, transitioning to renewable electricity, procurement that supports green industries, reducing waste and recycling;
- **Adapting to climate change** through improving canopy and green cover for cooler microclimates using Water Sensitive Urban Design (such as smart water use, rain gardens and kerbside water inlets to keep trees healthy), improving business and community resilience to extreme events such as heatwaves, bushfires and extreme storms;
- **Engaging with and collaborating with communities**, the business sector, other councils and regions, the Local Government Association (LGA) and the State and Federal Government on solutions and reforms where required, and;
- **Reporting annual progress and being accountable** through annual progress updates.

Net zero emissions can be achieved by quantifying GHG emissions of an organisation, reducing emissions as far as possible by using less, purchasing lower emission products and services (like renewable electricity) and by purchasing carbon offsets to address remaining emissions.

As purchasing carbon offsets does include a cost, it is important to first reduce emissions as far as possible. Purchasing offsets should be the last step to deal with remaining emissions.

# Introduction

# About the Town of Gawler

## The Town of Gawler – A unique identity

The Town of Gawler is located approximately 42km north of Adelaide and adjacent the Barossa Valley and Lower North. It covers 41 square kilometres and comprises the areas of Evanston, Evanston Gardens, Evanston Park, Evanston South, Gawler, Gawler East, Gawler South, Gawler West, Hillier, Kudla, Reid, Uleybury (part) and Willaston.

In 1839 after recognising its potential as the first country township outside of Adelaide, Colonel William Light planned the settlement of Gawler based on similar design principles as those he applied to Adelaide. The grid-like street layout reflected the town topography with parklands assigned to river floodplains nearby. The town was nestled against the hills' escarpment to the east, and the junction of the North Para, South Para and Gawler Rivers. This junction is called Parridila Taikondi, which means 'rivers coming together' and holds important significance for Aboriginal people past and present.

Light's vision of town parklands has been part of the vision of Gawler as a separate town, resisting the Town's absorption into the suburban spread of Adelaide.

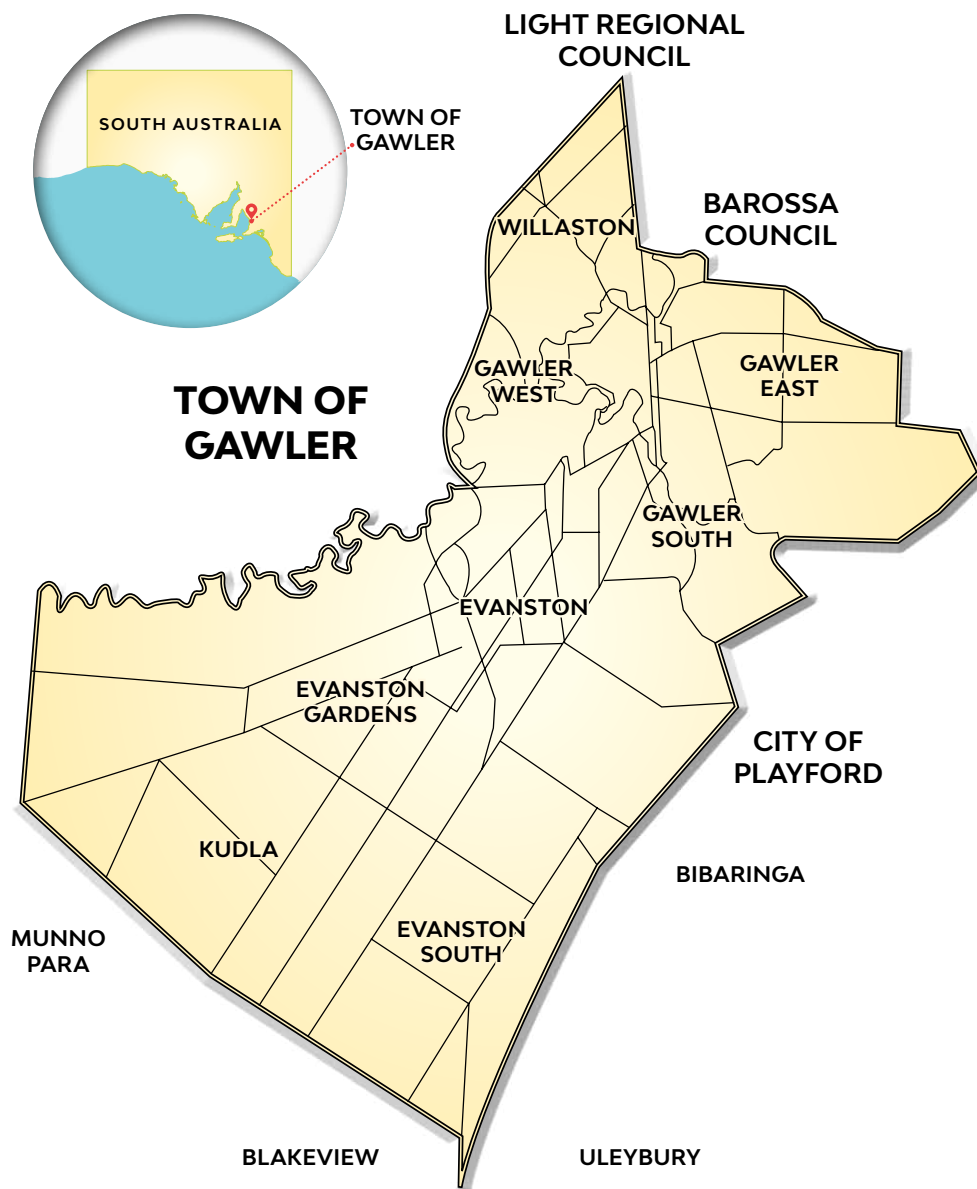
Since European settlement of the state in 1836, the traditional lands occupied by Kaurna people changed significantly. Gawler became a critical service centre for surrounding farming and mining areas from the early 1840s, particularly for the Kapunda and Burra copper mining communities in the lower and mid-north of the state. This resulted in rapid development of Gawler with construction of infrastructure and expansion of industry contributing to many of the heritage buildings still standing today. The expansion and intensification of development in Gawler since the early days of settlement has had significant impacts on the natural environment.

Current day Gawler includes a mix of community demographics, heritage and new growth areas and important environmental assets and open space that are highly valued. With predictions of the population almost doubling in the next 20 years, the Council is at a critical phase in its urban planning and management of its environmental assets. The biggest risk posed to our community, businesses and environment is that of unmitigated climate change. Whilst Gawler is small in size with a population of 25,000 people, we recognise that leadership on climate change is not limited by size.

The Town of Gawler has a warm temperate climate. Based on Parafield Airport BOM Dataset 1929-2021<sup>[2]</sup>, the Northern Adelaide region averages:

- 450mm of average rainfall per year;
- 18 days above 35°C, and;
- 2.4 days above 40°C.

Gawler and our neighbouring hills and plains regions are vulnerable to bushfires from late spring to autumn. During periods of high rainfall, there is a risk of flooding along the Gawler River System including the North Para, South Para and Gawler River corridors.



<sup>2</sup> [http://www.bom.gov.au/climate/averages/tables/cw\\_023013.shtml](http://www.bom.gov.au/climate/averages/tables/cw_023013.shtml)

# Our approach to developing the *Climate Emergency Action Plan*

## Establishment of the Climate Emergency Action Plan Working Group

Council established a Climate Emergency Action Plan Working Group (CEAP Working Group) by resolution at its 26 March 2019 meeting.

Membership of the working group includes members from Council, community, the Gawler Youth Advisory Committee (YAC) and Council staff.

The Working Group has developed the plan by bringing together ideas, from internal and external stakeholders and exploring the feasibility of options.

The inclusion of YAC members on the CEAP Working group has played a valuable part to ensure our on the action that we must take now to provide a safer climate for emerging and future generations.

## What we have heard from Youth Advisory Committee members

YAC members who reflect the views of our youth, are calling for:

- Urgent action on climate change;
- Acknowledgement that there is a climate emergency and absolutely no time to waste in reducing emissions to achieve net zero as soon as possible to prevent dangerous climate tipping points being reached and permanent stepped changes in climate;
- Sustainable development principles to be included in decision making;
- Access to clean and affordable technology and solutions that meet community needs without compromising the needs of future generations, and;
- A safe climate into the future that can support stable society, economy and biodiversity.

## Membership of the CEAP Working Group

The membership of the CEAP Working Group includes or has included:

- **Ms Kathryn Warhurst** (Chairperson, community)
- **Mr Darren Cox** (Community)
- **Mr Angus Millikan** (Gawler Youth Advisory Committee)
- **Cr Paul Koch** (Elected Member)
- **Cr Nathan Shanks** (Elected Member)
- **Cr Cody Davies** (Elected Member)
- **Renee Chamberlain** (Gawler Youth Advisory Committee)
- **Jade Hancock** (Gawler Youth Advisory Committee).
- **Alexander Prior** (Gawler Youth Advisory Committee)
- **Grace Gallagher** (Gawler Youth Advisory Committee)
- **Mr Jack Darzanos** (Council staff)
- **Mr Tim Kelly** (CEAP Executive officer, Council Staff)
- **Cr Paul Little** (Elected Member)
- **Mr Tom Bradanovic** (Community)
- **Mr Jack Gill** (Gawler Youth Advisory Committee)
- **Cr Ian Tooley** (Elected Member)



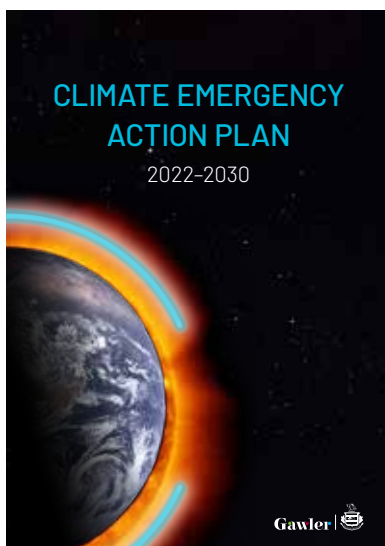
# Our planning framework

The *Climate Emergency Action Plan* is developed for local implementation, within the broader regional, state, national and global context of taking urgent action on climate change.

The CEAP is a document designed to lead and influence climate action throughout all areas of Council business. The CEAP reflects existing climate change and climate related actions already incorporated in many of Council's strategic planning documents. It also serves to bring these commitments together in a single area of focus, where new priorities and actions can be developed in annual business planning, reflecting new information, science and opportunities.

The Town of Gawler's *Annual Report* is a formal mechanism that reports to the community on an annual basis on Council's goals, objectives, strategies, actions and performance.

The following diagram shows that the Climate Emergency Action Plan supports the Town of Gawler Community Plan, and influences and is influenced by other Council plans.



## ■ Community Plan 2030+

*Supported by:*

- Annual Business Plan
- Open Space Plan
- Biodiversity Management Plan
- Emergency Management Plan
- Stormwater Management Plan
- Environmental Management Plan
- Long Term Financial Plan
- Long Term Infrastructure and Asset Management Plan
- Divisional Business Plans
- Regional Public Health and Wellbeing Plan
- Other Plans



# Taking emergency climate action

## Our mission

Our climate mission for the Town of Gawler is to:

*Rapidly decarbonise council operations by 2030, lead and enable climate action across our community and businesses towards achieving net zero emissions and to adapt to climate impacts.*

## Why a climate emergency

In August 2021, the Inter Governmental Panel on Climate Change released its Working Group 1 report, “The Physical Science Basis”, prepared by over 200 scientists with an update on how world is responding in relation to the scientific projections. The Australian Academy of Science President’s Statement<sup>[3]</sup> on the report included the following key messages:

*The evidence is overwhelming: human activities, particularly the burning of fossil fuels and the destruction of forests, are rapidly changing Earth’s climate in every region and across every climate system.*

*As the driest inhabited continent, Australia is highly vulnerable to the impacts of global warming. Recent events, including the scale and intensity of the summer bushfires of 2019–20, and the severe coral bleaching impacting the Great Barrier Reef that occurred in three of five years from 2016, demonstrate just two of the consequences of a warming planet for Australia’s people, economy, and environment.*

*All countries have to act.*

*The evidence tells us we must move beyond our current commitments and do more. Only through collective real, rapid, and large-scale greenhouse gas emission reductions can we lessen the scale of the impacts of global warming.*

*Whilst the IPCC report is sobering and the Code Red warning is real, the situation is neither hopeless nor insurmountable. But it is urgent.*

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<sup>3</sup> See Academy of Science Full Statement on the IPCC 2021 Working Group report here: <https://www.science.org.au/news-and-events/news-and-media-releases/presidents-statement-ipcc-working-group-1-report>

IPCC reports are no longer just projecting future scenarios based on the emission pathways that humans are following, but are increasingly reporting on the observations of change that have or are already occurring, and impacts already being experienced.

In February 2021, the Australian Academy of Science called on the Australian Government to accelerate Australia's transition to net zero greenhouse gas (GHG) emissions over the next 10 to 20 years to play our part in avoiding the worst impacts of climate change.

*The Risks to Australia in a 3° Warmer World*<sup>[4]</sup> (2021) report states that the world reaching net zero emissions by 2050 is an absolute minimum if Australia is to avoid potentially insurmountable challenges to its cities, ecosystems, industries and food and health systems. The report also says Australia is well positioned to play its part in meeting this challenge.

The Town of Gawler acknowledges the science that informs the need to respond to the global climate emergency. Council also recognises that action is required at all levels of government and by the community. As local government, the Town of Gawler has the closest levels of engagement with its community and is well placed to demonstrate climate action through its own operations and lead local climate action of its citizens and businesses.










The following climate change impacts<sup>[5]</sup> projected for South Australia indicate that the changes already being observed are set to continue and an emergency response is required to limit climate change that is already locked in and prevent global temperature increase exceeding 1.5 degrees above pre-industrial levels.

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<sup>4</sup> Academy of Science report *The Risks to Australia in a 3o Warmer World*  
<https://www.science.org.au/files/userfiles/support/reports-and-plans/2021/risks-australia-three-deg-warmer-world-report.pdf>

## Summary of climate change trends

South Australia has already become hotter and drier with more variable and extreme weather and these trends are projected to continue over this century and beyond. The chart below summarises state-wide trends projected to 2050.

	<b>Higher temperatures</b>	Maximum, minimum and average temperatures will increase.
	<b>Warmer spring temperatures</b>	Warming in spring is likely to be greater than in any other season.
	<b>Hotter and more frequent hot days</b>	The frequency of very hot days will continue to increase, and periods of hot weather will get longer and hotter.
	<b>Fewer frosts</b>	The frequency of frost events will remain comparable until 2030. In the longer-term, frosts are expected to decrease as the climate warms.
	<b>Declining rainfall</b>	Average annual rainfall will decline.
	<b>Lower spring rainfall</b>	Spring rainfall declines will be greater than any other season.
	<b>More drought</b>	Time spent in drought will increase.
	<b>More intense heavy rainfall events</b>	The number and intensity of heavy rainfall events will increase.
	<b>Increased potential evapotranspiration</b>	Potential evapotranspiration is projected to increase across all seasons.
	<b>Wind</b>	Wind speeds will remain comparable until 2030. In the longer-term, a pattern of winter wind speed decrease is likely.
	<b>More dangerous fire weather</b>	Harsher fire weather will be experienced, and fuels will be drier and more ready to burn.
	<b>Rising sea levels</b>	Sea levels will continue to rise.
	<b>Warmer and more acidic ocean waters</b>	Sea surface temperatures will continue to rise, and acidity will continue to increase.

<sup>5</sup> Guide to climate projections for risk assessment and planning in South Australia  
Department for Environment and Water November 2020

A glass globe of the Earth is positioned on the right side of the frame, resting on a bed of green grass and moss. The globe shows the continents and is surrounded by lush greenery. In the background, a bright sun flare creates a soft, glowing effect across the top left corner. The overall scene is a close-up of nature with a focus on sustainability.

# Our 2030 vision towards a stable climate





## Our climate vision for the Town of Gawler

*A safe climate for people,  
our economy and ecosystems  
through taking local action and  
supporting a global emergency  
response to climate change.*



## Our 2030 future scenario: This is where we would like to be.

### In 2030, the Town of Gawler has:

- *Demonstrated significant progress in reducing its emissions towards the goal of net zero by 2030;*
- *Taken major advances to improve its preparedness for climate change impacts, and;*
- *Improved the liveability and sustainability of the Town of Gawler.*

▼ **Gawler is regarded as a case study demonstration of how a small but determined council can be an effective leader in tackling climate change.**

### Renewable electricity transition

Gawler has now substantially been electrified with the vast majority of households equipped with on-site renewable electricity and storage systems. For owners and occupiers of properties not suited to on-site renewables, accredited GreenPower is available at a lower cost compared with standard grid electricity.

Communities have embraced electric cars, trucks and bikes, and charging stations are becoming accessible at most car parks and or at home. Urban weekend life is quiet as battery electric options for lawn mowers, snippers and chainsaws have replaced the noisy petrol driven options. Time restrictions no longer apply.

Local renewables coupled with energy efficient buildings of six, seven and eight star ratings have meant that even with charging a fleet of electric vehicles, the Town of Gawler as a whole is importing less electricity from the grid compared with 2020.

Whilst piped gas represented approximately 10% of Gawler's emissions in 2018, the transition to electricity-based equipment in homes and businesses has reduced this consumption to a negligible value. Gas pipeline networks in some residential areas are being closed where it is no longer feasible to maintain. Whilst there are still some industrial customers that rely on piped gas it is envisaged that these too will transition to renewable electricity.

Hot water and pool heating is now almost exclusively undertaken using solar or heat pump technology. Gas providers continue to explore options to increase the proportion of certified renewable hydrogen gas in the reduced network for their remaining customers.

## Transport

Gawler has embraced the concept of Transport Oriented Development with a massive expansion of the use of electric rail powered by 100% accredited renewable electricity. Gawler commuters value the rail network as the most energy efficient form of transport to Adelaide and the northern suburbs and actively promotes the extension of electric rail services to the Barossa and other potential destinations. A network of local electric busses enables train commuter pick up and drop off to a network of stops in and around Gawler.

There has also been substantial improvements to connect, improve and expand Gawler's cycling networks with undercover lockup and free recharging facilities at the train stations, which has resulted in a massive increase in cycling in and around Gawler. Express cycling lanes and dedicated routes have been created to support the rise of electric cycles.

Most households use electric vehicles for regular travel and business. There are still petrol diesel and gas powered vehicles, but these are used much less frequently for specific purposes such as distance travelling away from main roads, recreation and in historic cars with limited use.



## Resilience and living

Human settlements are largely sustainable and very resilient to extreme weather events and climate change. The Australian Building Code has been updated and settlements are segregated from native vegetation with high bushfire risk. Whilst housing is more compact, urban properties are greener with 30% green vegetation and canopy cover expected to be achieved as a result of Gawler's greening and planting programs. Water Sensitive Urban Design is established in the vast majority of properties and streetscapes, keeping vegetation green and healthy, which assists with shading and maintaining cooler microclimates.

Household dwellings and office sites are energy efficient and resilient, able to meet most of their own electricity needs with storage that provides an additional level of security. Buildings support - and are supported by - electric vehicles through recharging and drawing back some of this electricity when needed.

## Health and Wellbeing

Council has made a substantial contribution to the health of their communities. Immunisation, building and planning standards, food safety and environmental health regulation, have contributed towards protecting the community from disease and improving living conditions.

The public health planning process (as required by the SA Public Health Act 2011) recognises that we need to maintain effective public health protection systems for the control of infectious diseases as well as address emerging public health issues, such as:

- New or re-emerging infectious diseases;
- The global challenge of climate change, and;
- The potential implications on public health.

The costs of changing to low carbon solutions have been largely addressed by the falling cost of renewable electricity and electrification.

As new electric vehicles rapidly grow in market share, second hand electric vehicles have become affordable to buy and cheaper to run.

When housing was established, replaced or upgraded, efficiency improvements were made. Gas appliances and heating are being phased out and replaced with electric systems supported by renewable energy and energy storage systems. There were up front costs but the impact of these costs was minimised by choosing low carbon options at opportune times.

## **Green industries and a circular economy**

A circular economy is achieved where waste is eliminated through the reuse and recycling of products and resources. The Town of Gawler is working with the Northern Adelaide Waste Management Authority (of which it is part owner) and has made huge progress towards a circular economy over the past two decades. With pioneering efforts in waste sorting of containers to recycling from a much greater range of materials including E-waste, disposable batteries, soft plastics and glass fines, NAWMA is on track to eliminate the need for new waste disposal sites. Almost zero waste goes to landfill with the vast majority of material being recycled into new products.

Recycled materials and products include organics, plastics, road surfacing products, metals, glass and combustible fuels and a growing range of locally remanufactured goods. There have also been major advances in the way that products are built to last and be refurbished rather than single or short life use. The estimated diversion of collected material from landfill was estimated to be at 99% in 2030.

Sustainable water management is widespread, based on smart water use and integrating Water Sensitive Urban Design with urban rain gardens and kerbside water inlets boosting the health of our street tree assets. Bolivar recycled water is used carefully with site water management plans to monitor and assure the health of soil and shallow groundwater impacts.

The Town of Gawler – through collaboration across its community, local business and the State Government – has effectively tackled the key segments of the 2019-20 emissions sources and progressively found better ways to produce energy and live sustainably. We have adapted to climate change that continues to cause major issues, but there is now hope that a safer climate can be left for future generations. There is still much to do in looking at how carbon dioxide can be sequestered from the atmosphere to safe levels.





# Key goals and directions



# Climate emergency goals for the Town of Gawler

The Town of Gawler's goals are to reduce the Town's greenhouse gas (GHG) emissions as much and as fast as possible. This is driven by the scientific evidence showing that there is no time to delay action: mean and peak temperature records continue to be broken with a range of climate and ecological tipping points being exceeded, resulting in major impacts experienced globally. World renowned naturalist David Attenborough has stated that climate change is *"the biggest threat to security that modern humans have ever faced"* and warned that *"if we continue on our current path, we will face the collapse of everything that gives us our security"*<sup>6</sup>.

It is noted that Council does not have authority to regulate community emissions (sometimes referred to as "operational control"). However, Council has an important role to play in defining a positive future scenario, advocate state and federal governments for actions and policies where necessary and provide solutions that communities and businesses can embrace.

Being active to engage with stakeholders will assist Council in serving as a leader and addressing barriers. We have an important role to be a positive influence for our community.

In order for the Town of Gawler to be a community leader supporting the effort to limit global heating to not more than 1.5 degrees Celsius above 2005 levels, we have adopted the following goals:

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<sup>6</sup> United Nations 2021 Climate Change 'Biggest Threat Modern Humans Have Ever Faced', Press Release SC/14445 <https://www.un.org/press/en/2021/sc14445.doc.htm>

# Community goals

## LEAD GOAL

**Communities are enabled to achieve net zero emissions by 2030**

- GOAL 1** Communities have access to affordable 100% renewable electricity.
- GOAL 2** Communities are supported in the transition to electric vehicles by 2030.
- GOAL 3** Connected, safe and cooler walking and cycling routes.
- GOAL 4** Gawler community is able to utilise existing and new technology and practices that reduce consumption of energy at an affordable price.
- GOAL 5** Communities are resilient and prepared to cope with the increased frequency and severity of extreme weather, bushfire events and other natural disasters.
- GOAL 6** Climate risks and impacts are assessed and understood whilst addressing barriers that restrict climate change action, and we advocate on behalf of the community.

# Council operation goals

## LEAD GOAL

**Net zero emissions for Council operations by 2030**

- GOAL 7** A 25% improvement in efficiency for buildings and operations that require electricity by 2027.
- GOAL 8** 100% renewable electricity by Council by 2023.
- GOAL 9** Zero use of natural gas and liquid petroleum gas by 2025.
- GOAL 10** Council to be purchasing electric vehicles only by 2030.
- GOAL 11** Establish a Greening of Gawler policy to increase tree canopy cover from 15% to 30% by 2045 and enhance greening and biodiversity outcomes, supported by water sensitive urban design.
- GOAL 12** To be a leader in procurement of low carbon goods and services, precluding single use plastics, eliminating waste and maximising circular economy outcomes.
- GOAL 13** To establish a best practice approach in identifying and managing climate change risks for Council and our community.

# Implementation and Assurance

## LEAD GOAL

**Implement the CEAP, monitor outcomes, revise and improve to assure its effectiveness**

- GOAL 14** To be recognised as a leader in taking climate change action.

# Achieving our goals

## Council will direct its efforts to achieve our goals through:

- Community participation:
  - Collaborating with community and business to reduce emissions, and;
  - Supporting communities to adapt to climate change.
- Leading by example:
  - Reducing emissions in Council operations;
  - Assessing climate risks to Council and community, and;
  - And adapting to climate change.
- Engagement and advocacy:
  - Collaborating at local, regional, and state level with a range of stakeholders, and;
  - Addressing barriers to action and advocating for reforms at all levels of Government where necessary.

The Climate Emergency Action Plan is an aspirational plan. Whilst best endeavours will be made, some outcomes will be beyond control of Council. Some of the actions and initiatives within the plan have costs associated with their implementation.

Whilst all efforts will be taken to estimate project costs, decisions will be determined by the project business case, project timing and ultimately by Council consideration and resolution.







# Action Plan overview



# Summary of actions

High level strategic goals, commitments and actions are marked in colour.

Short: 1-2 years	Medium: 2-5 years	Long: 5-10 years
------------------	-------------------	------------------

Action for community		Due
<b>LEAD GOAL</b>		<b>Communities are enabled to achieve net zero emissions by 2030</b>
<b>GOAL 1</b>		<b>Communities have access to affordable 100% renewable electricity</b>
1.1	Advocate for fair accredited renewable electricity pricing structures, that reflect the falling cost of renewables with firming for all customers.	Ongoing
1.2	Explore and assess partnerships for local and regional South Australian renewable electricity.	Medium term
<b>GOAL 2</b>		<b>Communities are supported in the transition to electric vehicles by 2030</b>
2.1	Advocate for Gawler's rail service to be powered using 100% accredited renewable electricity, with accreditation to become a carbon neutral service.	Short term
2.2	Collaborate with the State Government and business on ways to provide recharging infrastructure.	Short term
2.3	Prioritise low carbon transport options in a Town of Gawler Transport Plan.	Medium term
2.4	Advocate for policy reforms necessary to enable broad scale take-up of electric vehicles.	Ongoing
2.5	Promote public transport and active transport options.	Ongoing

GOAL 3		Connected, safe and cooler walking and cycling routes	
3.1	Support local businesses and shopping centres to provide designated bicycle parking (with room for cargo bikes/ bike trailers).		Short term
3.2	Establish and enhance a pedestrian and cycling network that improves connectivity to existing and new communities and destinations.		Short term Ongoing
3.3	Ensure that pedestrian and cycling networks are designed to be safe, accessible and well shaded with complementary infrastructure (such as. bike parking, drinking fountains and rest stops).		Medium term
GOAL 4		Gawler community is able to utilise existing and new technology and practices that reduce consumption of energy at an affordable price.	
4.1	Town of Gawler will continue to act as an agent for the State Government's <i>Building Upgrade Finance Scheme</i> .		Ongoing
4.2	Explore and collaborate with the State Government and the Local Government Association on ways for customers to access advice, finance and available grant opportunities.		May 2022
GOAL 5		Communities are resilient and prepared to cope with the increased frequency and severity of extreme weather, bushfire events and other natural disasters.	
5.1	Engage and collaborate with local schools to assist students and families in understanding and planning for climate change.		Short term Ongoing
5.2	Support community resilience programs such as the <i>Red Cross Climate Ready Communities</i> .		Short term Ongoing
5.3	Establish a Town of Gawler Climate Change Open Day. Engage with Renew Australia on promoting Gawler best practice climate solutions as part of Sustainable House Day, where residents can tour participating households and businesses to hear from local champions, see solutions for climate adaptation and reducing emissions.		Short term Ongoing June 2022
5.4	Participate in consultation and advocacy opportunities that assist Council and our local community in contributing to a safer climate and to prepare for continuing climate change impacts.		Short term Ongoing

GOAL 6		Climate risks and impacts are assessed and understood whilst addressing barriers that restrict climate change action and advocate on behalf of the community	
6.1	Communities have guidance to access the best advice and opportunities to improve household and business resilience, including preparedness for extreme weather events such as heat waves bushfires, storms and flooding.	Ongoing	
6.2	Support forums where community can participate in assessing climate risks and impacts, and sharing ideas on how to be better prepared, including council, SES, CFS and Red Cross initiatives.	Ongoing	
Action description – For council operations		Due	
LEAD GOAL		Net zero emissions for Council operations by 2030	
GOAL 7		A 25% improvement in efficiency for buildings and operations that require electricity by 2027	Medium term
7.1	Upgrade Town of Gawler street lighting to LEDs by 2022 to reduce public light energy consumption by 60%.	Short term	
7.2	Use smart technology during street upgrades to optimise efficiency of the public lighting whilst maintaining lighting standards.	Ongoing	
7.3	Establish an energy efficiency upgrade program that aims for a 25% improvement in efficiency for buildings and operations that require electricity.	Medium term	
7.4	Investigate the cost of establishing the swimming pool as a carbon neutral operation to determine if this can be achieved through energy savings.	Medium term	

GOAL 8 100% renewable electricity for Council		
8.1	Commit to a transition pathway to 100% renewable electricity through the purchasing of accredited GreenPower and/or onsite and local renewables development.	Medium term
8.2	Investigate options to continue a program of on-site and off-site renewable electricity options to contribute to council's 100% renewable transition.	Medium term
GOAL 9 Transitioning gas to renewables by 2030		
9.1	Install alternative heat pump/solar/electric and insulation options for the heating of the public swimming pool by 2023/24 off season.	Medium term
9.2	Transition all sites away from gas to all electric technology options (by 2030).	Long term
GOAL 10 Council to transition its fleet to electric vehicles by 2030		
10.1	Establish a trial of fully electric vehicles for the light vehicle fleet.	Short term
10.2	Ensure that for every vehicle due for replacement a life cycle cost comparison is undertaken between an EV and fossil fuel powered option.	Ongoing
10.3	Develop a costed EV transition plan (including a recharge strategy).	Short term
10.4	From 2025, Gawler will implement a default procurement policy for all new light vehicles to be electric.	Medium term
10.5	From 2030, Gawler will implement a default procurement policy for all new heavy vehicles to be electric or an equivalent zero carbon technology such as renewable hydrogen.	Long term



<b>GOAL 11</b> Establish a greening of Gawler policy to increase tree canopy cover from 15% to 30% by 2045 and enhance greening and biodiversity outcomes, supported by water sensitive urban design		Long term
11.1	Establish sufficient plantings on council land and encourage greening on private land by 2030, that will result in 30% tree canopy cover by 2045 when the trees have matured.	Long term
11.2	Review infrastructure project checklists to ensure that WSUD elements are sought and integrated into hard and soft infrastructure projects and renewals.	June 2022
11.3	Establish 20 small and medium scale WSUD sites to demonstrate: <ul style="list-style-type: none"> <li>• Kerbside water inlets</li> <li>• Permeable paving</li> <li>• Permeable asphalt</li> <li>• Rain gardens</li> </ul>	Medium term
11.4	Continue to investigate and establish recycled water and establish harvested stormwater systems to supplement or replace mains water on council irrigated sites.	Long term
11.5	Become a member of Water Sensitive SA.	Short term Ongoing
11.6	Investigate ways to create micro rewilding sites with native gardens and shrubs.	Ongoing

<b>GOAL 12</b> <b>To be a leader in procurement of low carbon goods and services, precluding single use plastics, eliminating waste and maximising circular economy outcomes</b>		
12.1	Review the <i>Council Procurement Policy</i> to ensure that it is consistent with responding to the climate emergency.	Short term
12.2	Incorporate whole of life costing evaluation in major purchase decisions.	Ongoing
12.3	Increase purchasing of low carbon and recycled products and infrastructure materials.	Ongoing
12.4	Support the Northern Adelaide Waste Management Authority (NAWMA) to increase diversion of organic waste from landfill and maximise circular economy outcomes.	
12.5	Continue to eliminate sources of single use plastics.	Ongoing
12.6	Establish a zero-waste strategy for Council operations.	Medium term
12.7	Seek to reinvest efficiency outcomes and cost savings from actions into climate change actions.	Ongoing
12.8	Trial a carbon neutral event or events for Council	Short term
<b>GOAL 13</b> <b>To establish a best practice approach in identifying and managing climate change risks for Council and our community</b>		
13.1	Continue to develop and improve the Town of Gawler's preparedness and resilience to climate change, including to cope with: <ul style="list-style-type: none"> <li>• Prolonged drought and heatwaves</li> <li>• Bushfires</li> <li>• Storm and flooding event</li> <li>• Biological events such as pandemics and plagues</li> </ul>	Ongoing
13.2	Participate in a <i>Corporate Risk and Governance Program</i> for Elected Members, the Executive and Audit Committee.	Short term
13.3	Audit Town of Gawler Council heatwave preparedness against the <i>LGA Heatwave Guide for Local Government 2020</i> .	Medium term

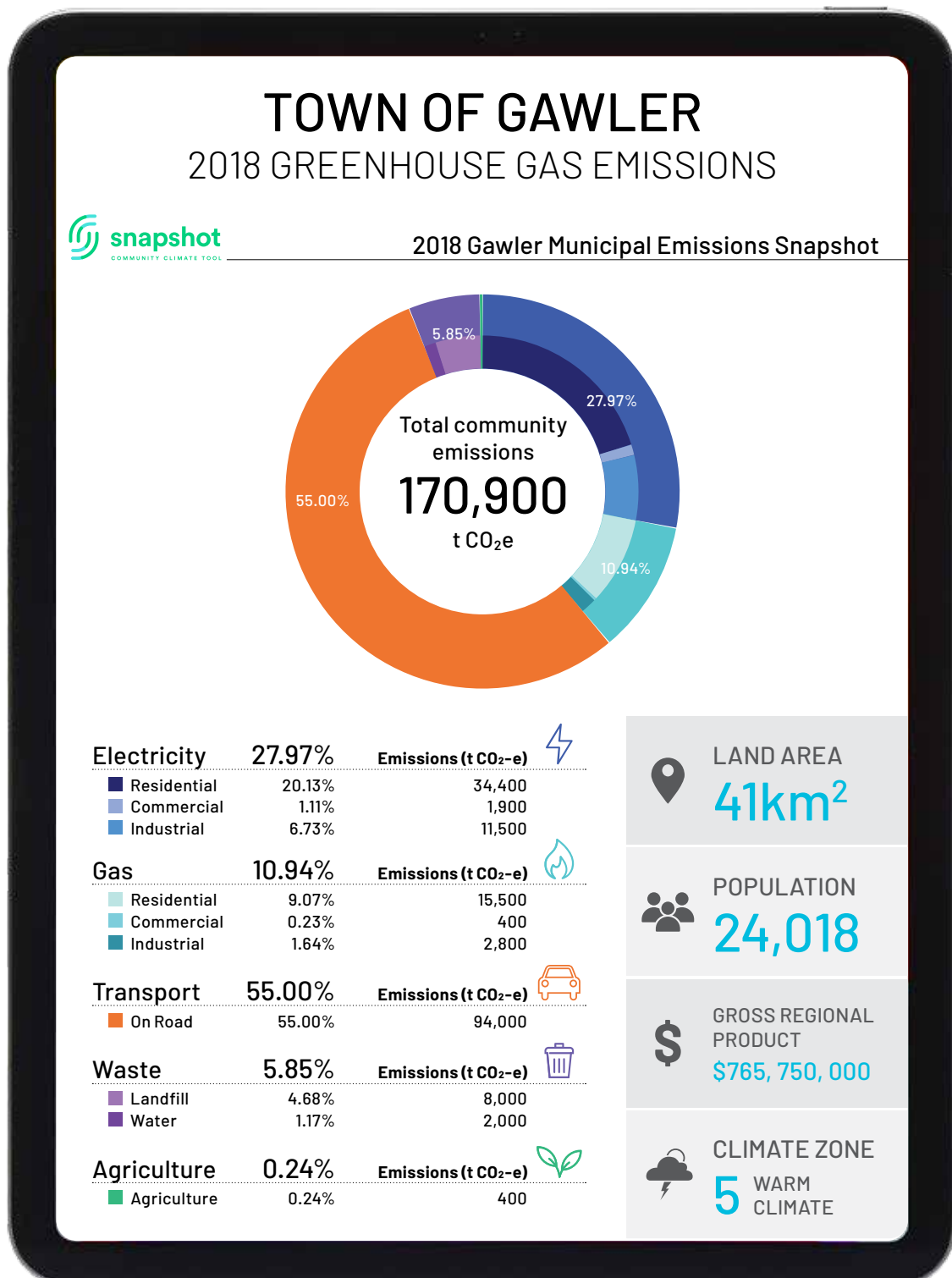
Implementation, Monitoring and Review		Due
<b>GOAL 14</b> Implement the CEAP, monitor outcomes revise and improve to assure its effectiveness		
14.1	Prepare a <i>Climate Governance and Accountability Plan</i> that will guide our public reporting and transparency in how we respond to the climate emergency and report progress to implement our <i>CEAP</i> .	June 2021
14.2	Monitor community scale emissions whilst continuing to broaden and improve greenhouse and renewable accounting methods.	December 2021
14.3	Continue to advocate that local, state and federal governments and organisations declare a climate emergency and take urgent action to reduce emissions.	Ongoing



# Supporting community climate action



The GHG emissions profile for the Town of Gawler is provided in the following snapshot provided by *Beyond Zero Emissions and Ironbark Sustainability*. These snapshots have been prepared for every council area in South Australia and align with GHG Protocol methodologies and Australian National Greenhouse Accounts Factors. The snapshot is not a true emissions inventory but a high-level profile in time based on ABS data and consumption rates of resources within the town boundary.



# Community emissions reduction

## LEAD GOAL

**Communities are enabled to contribute to achieve net zero emissions by 2030**

Town of Gawler residents, businesses and visitors will have access to opportunities, products and services that will enable them to fully participate in addressing the climate emergency and will understand the urgency to do so.

Community emissions make up more than 99% of Town of Gawler's total emissions, so whilst it is important for Council to reduce its emissions, it is also essential for Council to find ways to support households and businesses to do the same.

The most recent 2018 emissions profile for the Town of Gawler shows a change from the 2017 snapshot in that transport emissions (55%) have increased whilst electricity related GHG emissions (28%) have reduced.

Part of the explanation for this change is that there are greater transport emissions from commuters, whilst the GHG intensity of electricity supply has decreased as the proportion of renewable electricity continues to increase in South Australia. Other significant contributing sources of emissions are from gas consumption (11%) and waste (6%).

This snapshot does not include many of the emissions caused when making products such as building materials, vehicles, appliances, clothing and other purchased goods.

The great news is that households and businesses in the Town of Gawler are already taking action to reduce emissions, but there is more to do and many barriers that prevent further action.

There is a high take up of on-site renewable electricity systems and an average of 17,000 commuters use the Gawler Rail service each working day.

Community action on climate change includes the transition towns, and Australian Youth Climate Coalition movements.





# Renewable electricity

## GOAL 1

### Communities have access to affordable 100% renewable electricity

This means that our community has access to accredited renewable electricity (either generated on site or as accredited GreenPower via the grid), at an affordable price and underpinned by legislation.

The following actions by Council are practical things that the Town of Gawler can do for our community to support the transition to renewable electricity.

## ACTIONS

- 1.1 Advocate strongly for fair pricing structures for 100% renewable electricity, ensuring it's affordable for all customers and reflects the falling cost of renewables with firming.**
- 1.2 Explore and assess partnership opportunities for local and regional South Australian renewable electricity.**

## CONTEXT

As of December 2019, between 30% - 40% of households and businesses in Gawler have established on-site solar power systems (Australian PV Institute<sup>[7]</sup>).

In regard to electricity sourced from the grid, South Australia's electricity generation is nearing 60% renewable electricity, but there is no legal definition that allocates this to South Australian consumers. Businesses are actively seeking out renewable Power Purchasing Agreements (PPAs) and households can choose to purchase GreenPower, but the frameworks to underpin renewable markets require improvement.

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<sup>7</sup> Australian PV Institute See: <https://pv-map.apvi.org.au/historical#12/-34.6066/138.7069>



In 2019, there were 8,086 residential customers in South Australia who purchased 13,271 MWh of GreenPower and 158 commercial customers that purchased 39,091 MWh of GreenPower (*GreenPower Annual Audit 2019*<sup>8</sup>). A suburb by suburb breakdown is not available.

Renewable electricity, even with firming, is now the cheapest electricity to produce, yet for most households and small to medium businesses it is currently charged as an additional cost to electricity.

Further opportunities for communities to participate in the renewable electricity transition include:

- Virtual power stations where communities share local renewable electricity and electricity storage; and
- Using smart technology to make use of the batteries in electric vehicles to help manage the electricity grid.

## STRATEGY

The strategy of the Town of Gawler is to advocate to the Federal Government and electricity regulators for all electricity consumers to have access to affordable renewable electricity in contracts that are underpinned by legislation.

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<sup>8</sup> GreenPower See: <https://www.greenpower.gov.au/sites/default/files/2020-12/GreenPower%202019%20Public%20Report.pdf>

# Low emissions public and private transport

## GOAL 2

**Communities are supported in the transition to electric vehicles by 2030**

Our communities will be supported to have affordable access to zero and low emissions transport options within and beyond the Town of Gawler.

## ACTIONS

- 2.1 Advocate for Gawler's rail service to be powered using 100% accredited renewable electricity, with accreditation to become a carbon neutral service.**
- 2.2 Collaborate with the State Government and business on ways to provide recharging infrastructure.**
- 2.3 Prioritise low carbon transport options in a Town of Gawler Transport Plan.**
- 2.4 Advocate for policy reforms necessary to enable broad scale take-up of electric vehicles.**
- 2.5 Promote public transport and active transport options.**

## CONTEXT

### Rail

A large number of Gawler's citizens commute daily for work using public transport, private transport and commercial vehicles

Train services are important to Gawler citizens with approximately 950,000 trips taken annually and 3,000 trips daily on weekdays from commuters traveling to Adelaide or other destinations along the Northern Metropolitan Train Route. These services are highly valued by our community and will become more important with continued population growth.

The rail system to Gawler is being transitioned to support electric trains which will reduce emissions, and if powered with accredited renewable electricity, will be close to a carbon neutral way for commuters to travel to and from Adelaide.

### **Electric vehicles**

Progress towards electric vehicles is also moving at a rapid pace with more options for electric bicycles, scooters, light vehicles and trucks becoming available each month. However, the transition will require that communities have access to the best information to be able to compare the life cycle costs of electric vehicles with those of fossil fuelled vehicles.

Collaborating with the State Government and private sector on planning the rollout of charging stations will be essential to support the electric vehicle transition.

### **Other technologies**

Other low emissions technologies may also be deployed, for example those that use alternative fuels. Such technologies will also require policy frameworks and supporting infrastructure if they are to make a meaningful contribution.

## **STRATEGY**

The Town of Gawler aims to support affordable access to zero and low emissions transport options within and beyond the Town of Gawler by collaborating with the State Government, businesses and adjacent councils to develop low emissions transport options for community and business.

# Walking and cycling

## GOAL 3

### Connected, safe and cooler walking and cycling routes

The Town of Gawler community will have connected networks of walking and cycling routes, ideally shaded through street trees and tree canopy, for safe and comfortable active transport as a local transport choice.

This will be implemented as part of increasing urban canopy and green cover within the township whilst promoting active lifestyles supporting public health and wellbeing.

## ACTIONS

- 3.1 Support local businesses and shopping centres to provide designated bicycle parking (with room for cargo bikes/ bike trailers).**
- 3.2 Establish and enhance a pedestrian and cycling network that improves connectivity to existing and new communities and destinations.**
- 3.3 Ensure that pedestrian and cycling networks are designed to be safe, accessible and well shaded with complementary infrastructure (such as bike parking, drinking fountains and rest stops). Encourage and support local walking and cycling.**

## CONTEXT

The Town of Gawler has established a number of walking and cycling pathways which are a great foundation for enhancing opportunities for an active lifestyle. These pathways follow the Gawler River within the township, are designated on some roadways and extend into the Barossa Valley along the rail line.

Noting the increasing popularity of walking and cycling in recent years, and that many car trips are for distances less than 5km, there is further opportunity to connect, enhance and extend walking and cycling pathways across the Town of Gawler, including into new development precincts and along the Gawler River.

## STRATEGY

This plan supports an increased focus on making a network of 'low carbon/active transport' routes that are relatively direct, wide and shaded. Some of these improvements may require collaboration with adjacent councils and longer-term planning to guide progressive scheduled projects.



# Energy efficiency

## GOAL 4

**Gawler community is able to utilise existing and new technology and practices that reduce consumption of energy at an affordable price**

One of the most cost effective ways to reduce emissions is to avoid creating them through energy efficiency.

## ACTIONS

- 4.1 Town of Gawler will continue to act as an agent for the State Government's Building Upgrade Finance Scheme.**
- 4.2 Explore and collaborate with the State Government and the Local Government Association on ways for customers to access advice, finance and available grant opportunities.**

## CONTEXT

While not being in a position to make an assessment of energy efficiency in the community, Council recognises that supporting energy efficiency in the community is critical for addressing the climate emergency and reducing costs for customers.

Improvements in technologies that can deliver greater energy efficiency every year are significant. However, when these technologies are not deployed because of the up-front cost or knowledge barriers, then Gawler businesses and households are disadvantaged.

Examples include the progress in the energy efficiency of air conditioning systems for heating and cooling, control systems, refrigeration units and lighting.

## STRATEGY

The strategy is for the Town of Gawler to actively advocate for solutions that will enable businesses and households to deploy efficient technologies and solutions that lower emissions and reduce their everyday operating expenses. Potential stakeholders include the Gawler Business Development Group (GBDG), community groups and schools.

This will require activities that directly or indirectly:

- Inform Gawler businesses and households on the opportunities and solutions, plausible cost savings and emissions reductions, and;
- Support and connect Gawler customers to access advice, finance, and available grant opportunities.

### BUILDING UPGRADE FINANCE (BUF) SCHEME

Building Upgrade Finance is a finance product to assist building owners with environmental upgrades to non-residential buildings, and with restoration and upgrades to heritage buildings. Under Building Upgrade Finance, an agreement between the building owner, finance provider and local council is entered into, where a:

- building owner seeks finance for a building upgrade;
- finance provider lends finance to the building owner;
- council collects repayments from the building owner and transfers them to the finance provider.

The finance structure, including local councils, provides finance providers with additional security that enables unique product benefits, such as:

- long term loans (10-20 years);
- fixed interest rates;
- ability to transfer the repayments on sale of land, and;
- the ability to share costs and benefits with tenants.

This is due to the loan being tied to the property, rather than the building owner, through the local government charge (Building Upgrade Charge) used to collect repayments. This means in the event of default this charge is ranked senior to mortgages, taxes and other charges.

More information on Building Upgrade Finance, including successful projects, is on the **Building Upgrade Finance website**. The Building Upgrade Finance Central Facilitator is available to assist. For further information please contact:

**Building Upgrade Finance Central Facilitator for South Australia**  
Phone: (08) 8203 7884 Email: [sa@buildingupgradefinance.net.au](mailto:sa@buildingupgradefinance.net.au)

# Engaging with communities and advocacy at all levels

## GOAL 5

**Communities are resilient and prepared to cope with the increased frequency and severity of extreme weather, bushfire events and other natural disasters**

Council will proactively engage with householders, businesses, community groups and other stakeholders to help them understand the urgency of addressing the climate emergency.

## ACTIONS

- 5.1 Engage and collaborate with local schools to assist students and families in understanding and planning for climate change.**
- 5.2 Support local delivery of community resilience programs such as the Red Cross Climate Ready Communities.**
- 5.3 Establish a Town of Gawler Climate Change Open Day. Engage with Renew Australia on promoting Gawler best practice climate solutions as part of Sustainable House Day, where residents can tour participating households and businesses to hear from local champions, see solutions for climate adaptation and reducing emissions.**
- 5.4 Participate in consultation and advocacy opportunities that assist Council and our local community in contributing to a safer climate and to prepare for continuing climate change impacts.**

## CONTEXT

### **Households and businesses**

Gawler community and businesses are responding to climate change but awareness and participation are not uniform. Engagement to date shows a general understanding and acceptance of the science, but that differences remain on the extent of causes of climate change and its current and potential impacts.

There are local champions that are willing to share their knowledge, experience, practical and technological solutions.

Businesses seek affordable solutions that they can access, better ways of being alerted to assistance grants and greater policy certainty to make decisions about growing green and low emissions markets.

### **Councils leading on climate change**

At the date of publication, there are 16 councils in South Australia, including Gawler, that have declared a climate emergency.

The Town of Gawler has taken a leadership position on climate emergency action. Whilst we were the first council in South Australia to declare a climate emergency, there is a greater need for a collective movement for local, national and a global response. Part of the Town of Gawler's response is to encourage and advocate for other councils, the Local Government Association, state and territory governments to also declare a climate emergency and respond in a way that the science suggests that we must act – urgently.

Globally there are 1,990 jurisdictions in 34 countries that have declared a climate emergency (19 June 2021). Populations covered by jurisdictions that have declared a climate emergency exceed 1 billion people.

## Consultations and policy

The Town of Gawler recognises that there are many current policies and laws that are not consistent with preserving a safe climate. There are also both scheduled and unscheduled consultation opportunities where the Town of Gawler can highlight issues and suggest reforms.

Recent examples of contributing to policy reform include:

- South Australia's Planning Reforms and establishment of a New Planning Design Code, and;
- Climate Active Consultation on Scope 2<sup>[9]</sup> Electricity Emissions Accounting.

## Advocacy

The Town of Gawler will lead by example and advocate on any areas where improvements for faster action can be made. This includes, but is not limited to:

- Advocating that the local, state and federal governments are united in declaring a climate emergency and taking all necessary short term and long-term steps to maintain a safe climate;
- Contributing to state and federal climate policy on matters that impact the Town of Gawler and its people;
- Contributing to the Local Government Association to maximise the voice of local government taking action on climate change;
- Ensuring that there is a legal framework that underpins renewable electricity markets and use;
- Ensuring that the pricing structure of retail renewable electricity is fair, and reflects the falling cost of renewables;
- Reducing barriers which stand in the way of transitioning to electric vehicle use, and;
- Advocate for improved outcomes for resilient communities through the process of planning reform, such as roof colours, greener neighbourhood planning, walking and cycling design and infill standards.

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<sup>9</sup> See Appendix 3: Emission Scope Diagram



## STRATEGY

The Town of Gawler will continue to engage on climate change with local communities and business, as well as advocating for policy and planning reforms where necessary.



# Community climate adaptation and resilience

## GOAL 6

**Climate risks and impacts are assessed and understood, whilst addressing barriers that restrict climate change action and advocate on behalf of the community**

This goal is about supporting the Gawler community to have a good understanding of climate risks and to be supportive of and engaged in climate adaptation activities to improve community resilience.

Initiatives like creating cooler streets and microclimates through greening and best practice in water use will help to make Gawler cooler in the hotter months of the year.

## ACTIONS

- 6.1 Communities have guidance to access the best advice and opportunities to improve household and business resilience, including preparedness for extreme weather events such as heat waves, bushfires, storms and flooding.**
- 6.2 Support forums where community can participate in assessing climate risks and impacts, and sharing ideas on how to be better prepared, including council, State Emergency Service (SES), Country Fire Service (CFS) and Red Cross initiatives.**

## CONTEXT

### Projected changes in climate by 2070

The Town of Gawler plays an ongoing role in preparing for and responding to natural hazards including heat waves, bushfires and flooding. In the *Adapting Northern Adelaide Plan*, completed for the City of Salisbury and City of Playford, the *Integrated Vulnerability Assessment Report for Northern Adelaide* (Seed Consulting & URPS, 2016) identified that the Northern Adelaide region would experience the following impacts by 2070 under a high-emissions scenario (business as usual):

- Annual rainfall is projected to decline by about 11 per cent;
- Rainfall intensity could increase by 16 per cent;
- Annual maximum temperatures are projected to increase by 2.3°C;
- Annual minimum temperatures could increase by 2°C, and;
- Extreme heat days per year (35°C or higher) could increase by 76 per cent to 82 per cent (up to 44 days).

The *Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5°C* has highlighted the need for urgent action to prevent severe impacts of climate change resulting from a continuation of high emissions globally.

Practical steps that communities can make include:

- Preparing for heatwaves and checking in on family and neighbours when they occur
- Those at risk of bushfire to prepare their bushfire survival plan and property preparedness plans;
- Being prepared for wetter and more severe storm events, particularly when located along near streams and low lying areas;
- Increasing canopy and green cover on private land, in gardens and on public land can help maintain cooler conditions in summer; and,
- Reviewing and maintaining insurance.

It is also the concern of this generation - and our responsibility - that climate will continue to change with impacts lasting up to thousands of years, affecting future generations.

Whilst the Town of Gawler must adapt to the unavoidable impacts of climate change that are already locked in, we must also play our part in reducing emissions for a safer future.

## STRATEGY

Council will support communities as we face the continuing direct and indirect challenges associated with climate change. This will include engaging with communities on climate change risk including and extreme weather events such as drought, heatwaves, bushfire, storms and floods.

Council will advocate for communities to have access to low carbon technology and solutions that will assist communities to become more resilient to climate impacts.





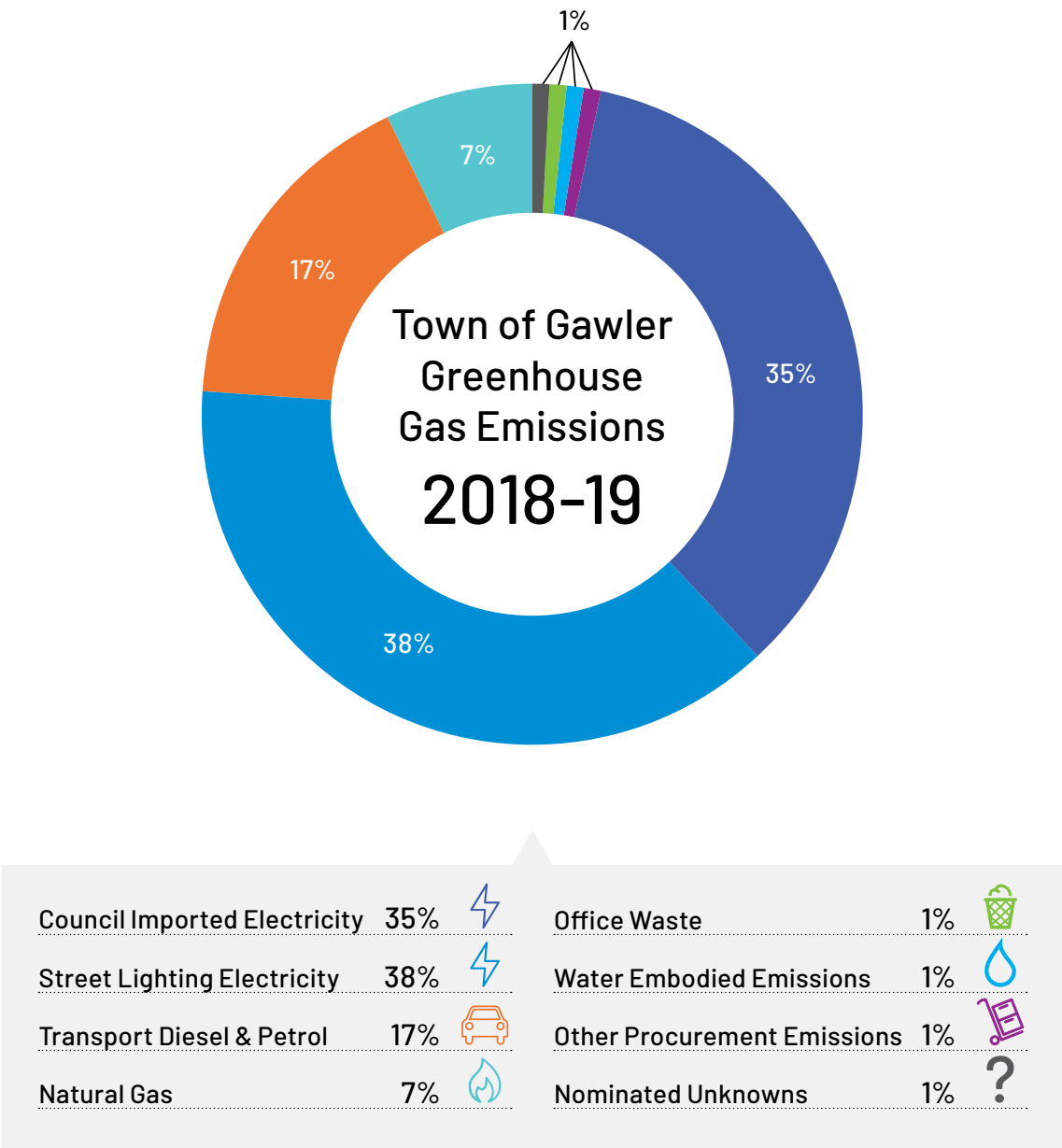


# Council operations

# Council energy and emissions baseline

The Town of Gawler initial greenhouse gas inventory identified operational emissions of approximately 1650 tonnes of CO2-e in 2018-19. Whilst the inventory was not complete, and included some nominal allowances, it did for the first time quantify the council’s major sources of operational emissions and is a useful baseline for future comparisons. Any significant additional sources of emissions identified and monitored in future years may lead to an upwards adjustment of the baseline year data.

The following diagram identifies the main contributing sources of Town of Gawler operations in our baseline year.



## Electricity

Gawler Council consumes around 1,900 MWh/year of electricity:

- Offices and sites consume nearly half of all electricity at around 950 MWh/year.
- Unmetered street and traffic lights consume around 1000 MWh/year.

For 2018/19, the Council's renewable electricity percentage was 22% overall from GreenPower and on-site solar electricity.

In 2020-21, Council produced and consumes 91 MWh from on-site generation from solar systems fitted on the Gawler Administration Centre and the Gawler Sports and Community Centre. With new systems installed on the Gawler Civic Centre and Evanston Gardens Library, on site renewables are projected to increase towards 200 MWh in 2021-22 and will represent approximately 15% of Gawler's total electricity demand. With current GreenPower purchasing the voluntary renewables are projected to be an estimated 30% of our electricity use for 2021-22.

## Transport fuels

The Town of Gawler purchases approximately 80,000 litres of diesel fuel and 25,000 litres of petrol to operate its heavy and light vehicle fleet each year. Currently, Council has two hybrid cars and one plug-in hybrid electric car in its fleet.

## Piped gas

Approximately 3000 GJ of piped gas is consumed from the network with the vast majority of this used to heat the Gawler Aquatic Centre.

Piped gas and LP Gas is used at a number of other sites including the Gawler Civic Centre, and Gawler Sports and Community Centre, mainly to support kitchen activities and hot water services.

## Other sources of emissions

Whilst it is not yet possible to report on smaller sources of emissions and those embodied in products and services (Scope 3 emissions<sup>[10]</sup>) that are consumed, Council acknowledges that these sources exist and will progressively incorporate those that cause a material addition to the Council operations greenhouse footprint.

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<sup>10</sup> See Appendix 3: Emission Scope Diagram



## Town of Gawler Solar Power

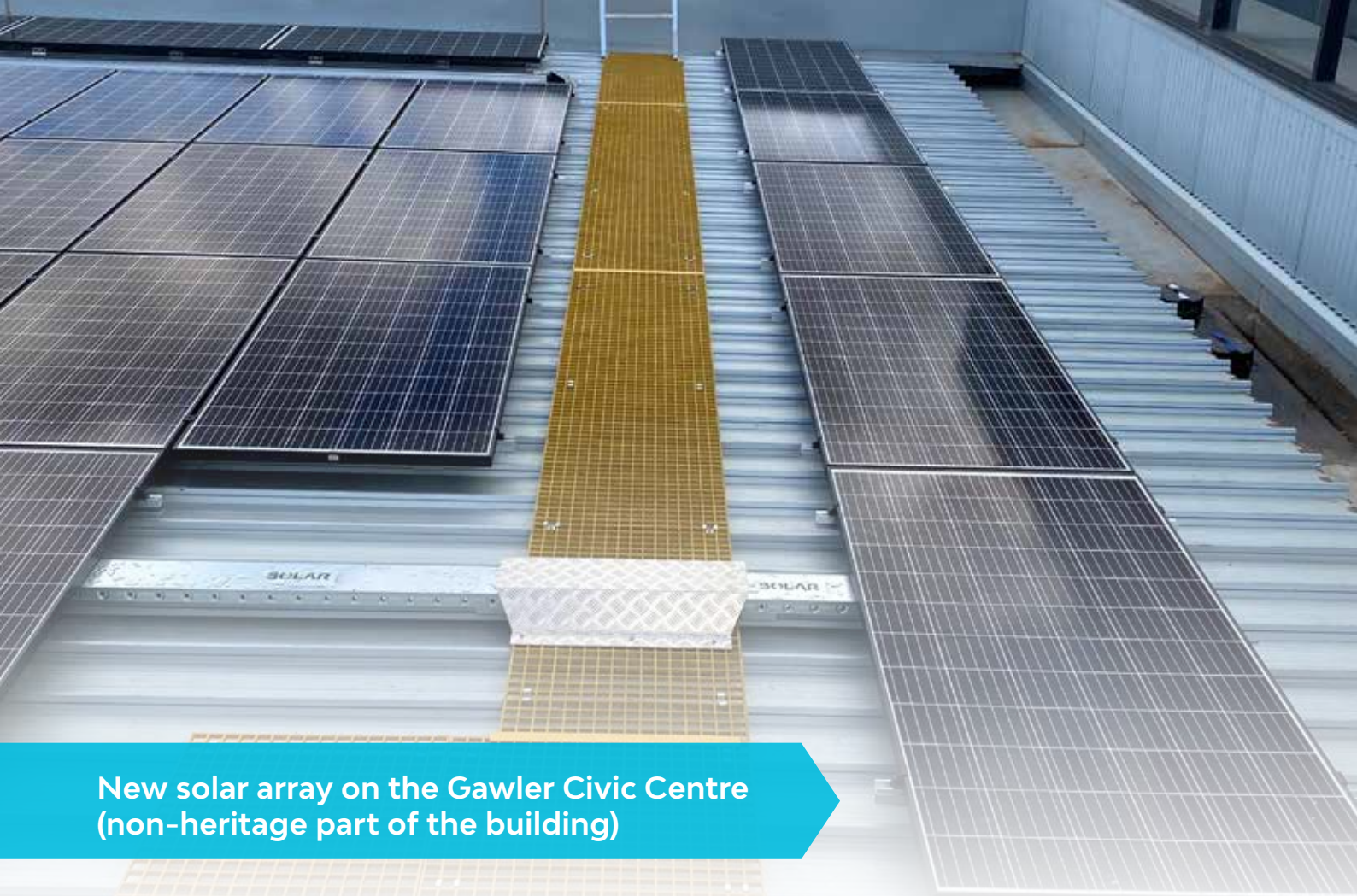
In 2019, the Town of Gawler installed solar systems on the Gawler Administration Centre and Sports and Community Centre. New solar electricity systems have now been installed and are operational on the Gawler Civic Centre and the Evanston Gardens Library, adding to the existing systems installed on the Gawler Administration Centre and Sports and Community Centre.

These systems are projected to add an additional generation capacity of ~55 kW which will represent an annual yield of 82,000 kWh of electricity or another 4% of Council's electricity use coming from on-site renewables. This addition will result in approximately 15% of Council's total electricity use coming from on-site renewable electricity.



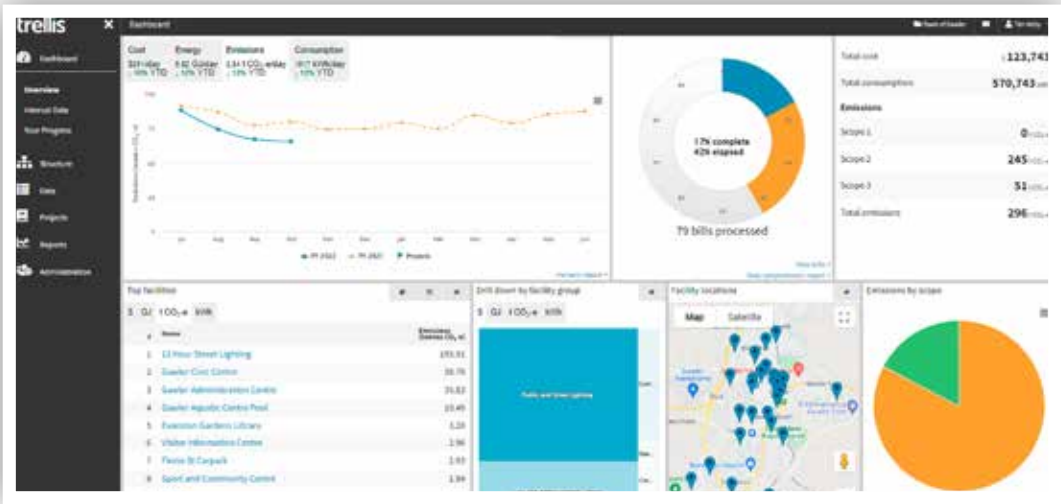
New Solar array at Evanston Gardens Library



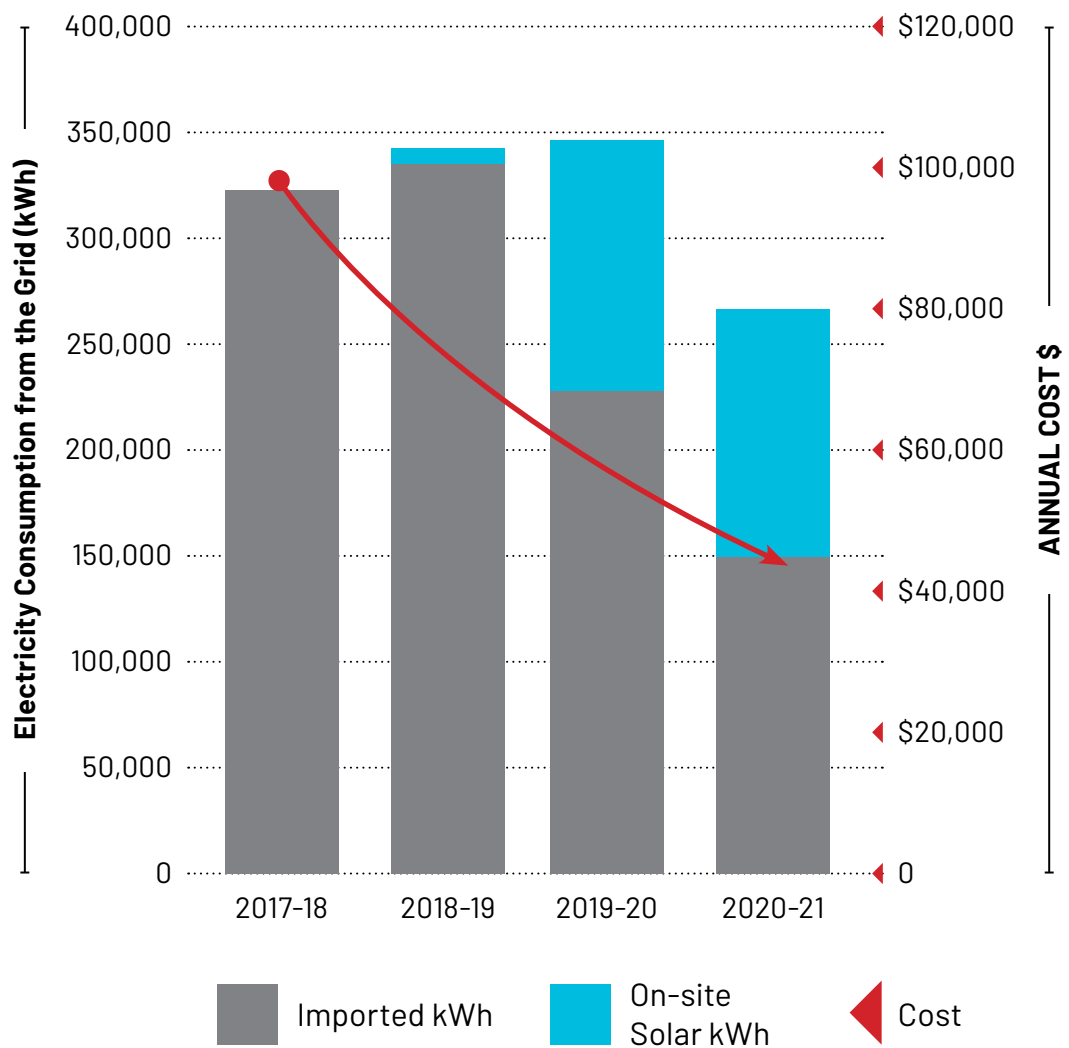


Further planning is being undertaken to continue the program of on-site solar electricity to contribute towards achieving 100% renewables use for council operations. The solar system established on the Gawler Administration Centre can be confirmed as leading to a significant reduction in the amount of imported electricity required and cost.

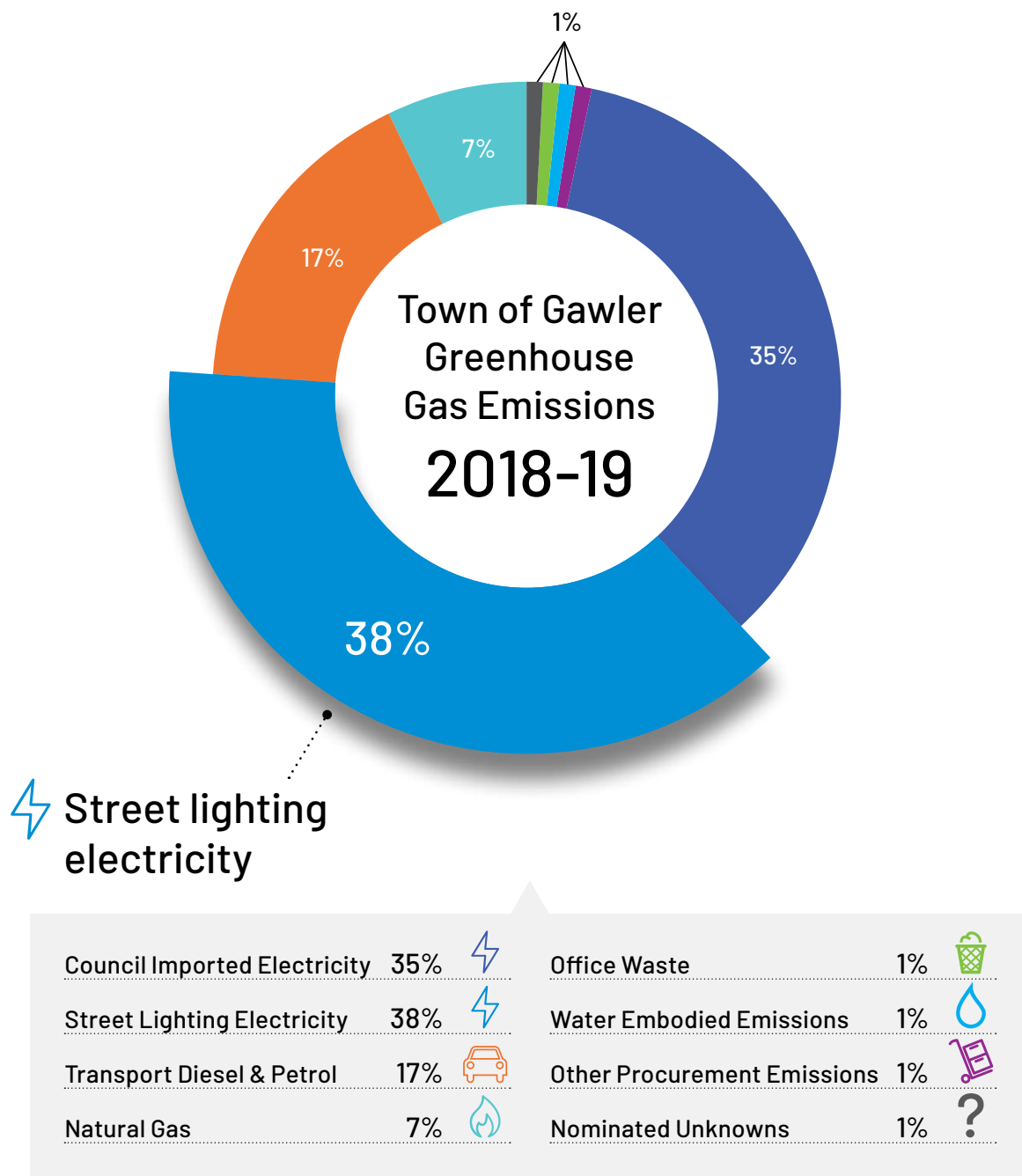
The chart on the following page from Council billing data, shows that the costs and volume of purchased electricity has reduced (please note that there are multiple factors that have led to reduced costs which includes but is not exclusive to the solar electricity and reduced occupancy of the building during the year).



## Gawler Administration Centre electricity consumption and cost



## Electricity emissions – Street Lighting



A specific energy efficiency opportunity is to convert Gawler's street lighting to Light Emitting Diode (LED) technologies. It has been estimated that if Gawler's 3000 street lights were all converted to LEDs there would be a saving of 50W per light, representing:

- A 60% reduction in street lighting electricity consumption;
- A 25% reduction in Council's overall electricity consumption;
- A reduction in recurrent electricity costs of \$130,000 per year, and;
- A 20% reduction of total Gawler Council operational GHG emissions.



With the price to charge councils for street lighting being regulated by the Australian Energy Regulator from July 2020, council has investigated options for the changeover to occur and has scheduled the project to occur during 2021-22. Other councils have already taken action in this space. Results of the public lighting upgrades have led to an overall cost saving.

Gawler Council will also explore the best choice of lighting colours to minimise the attraction of insects and minimise harm. Short wavelength bluer tint lighting tends to attract insects more than longer wavelength yellower tint lighting.





# Reducing emissions in Council operations

## LEAD GOAL

Net zero emissions for Council operations by 2030

## Energy efficiency in buildings and operations

### GOAL 7

A 25% improvement in efficiency for buildings and operations that require electricity by 2027

Working towards this goal will demonstrate best practice in energy efficiency and the use of efficient technology.

## ACTIONS

- 7.1** Upgrade Town of Gawler street lighting to LEDs by 2022 to reduce public light energy consumption by 60%.
- 7.2** Use smart technology during street upgrades to optimise efficiency of the public lighting whilst maintaining lighting standards.
- 7.3** Establish an energy efficiency upgrade program that aims for a 25% improvement in efficiency for buildings and operations that require electricity.
- 7.4** Investigate the cost of establishing the swimming pool as a carbon neutral operation to determine if this can be achieved through energy savings.

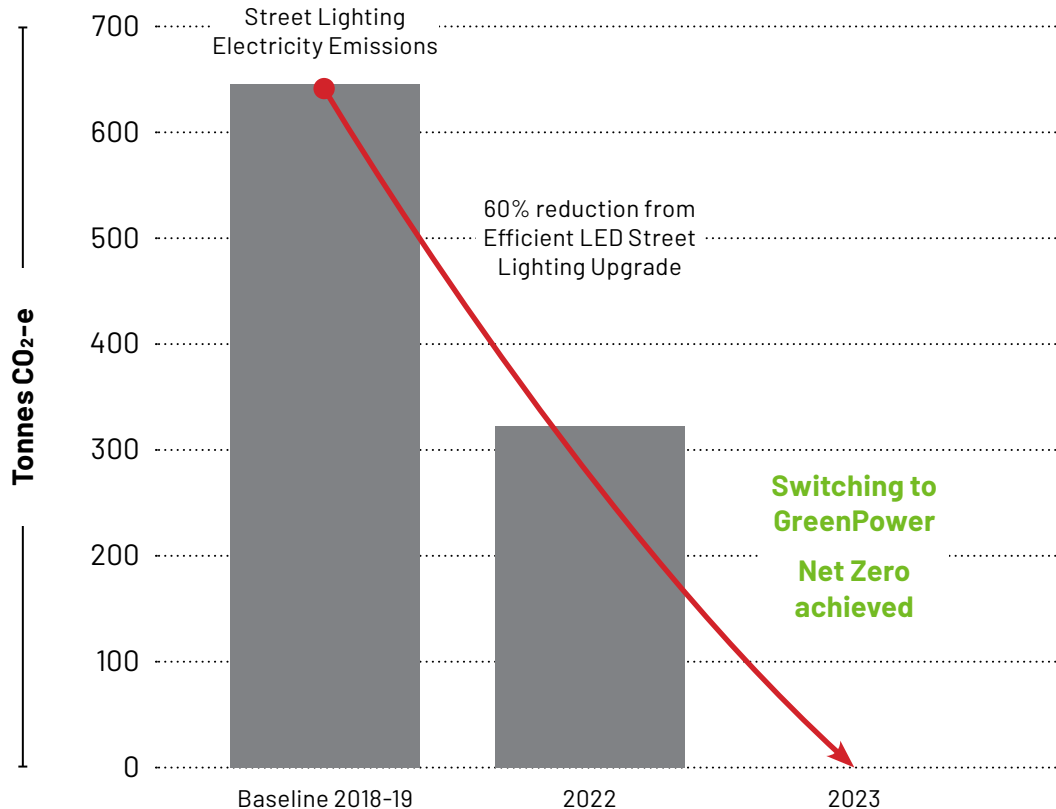
## CONTEXT

Energy efficiency is often described as “the low hanging fruit” where recurrent electricity, cost and emissions reductions can be achieved. The Town of Gawler has commissioned a number of energy efficiency reports for different sites with some recommendations not yet implemented.

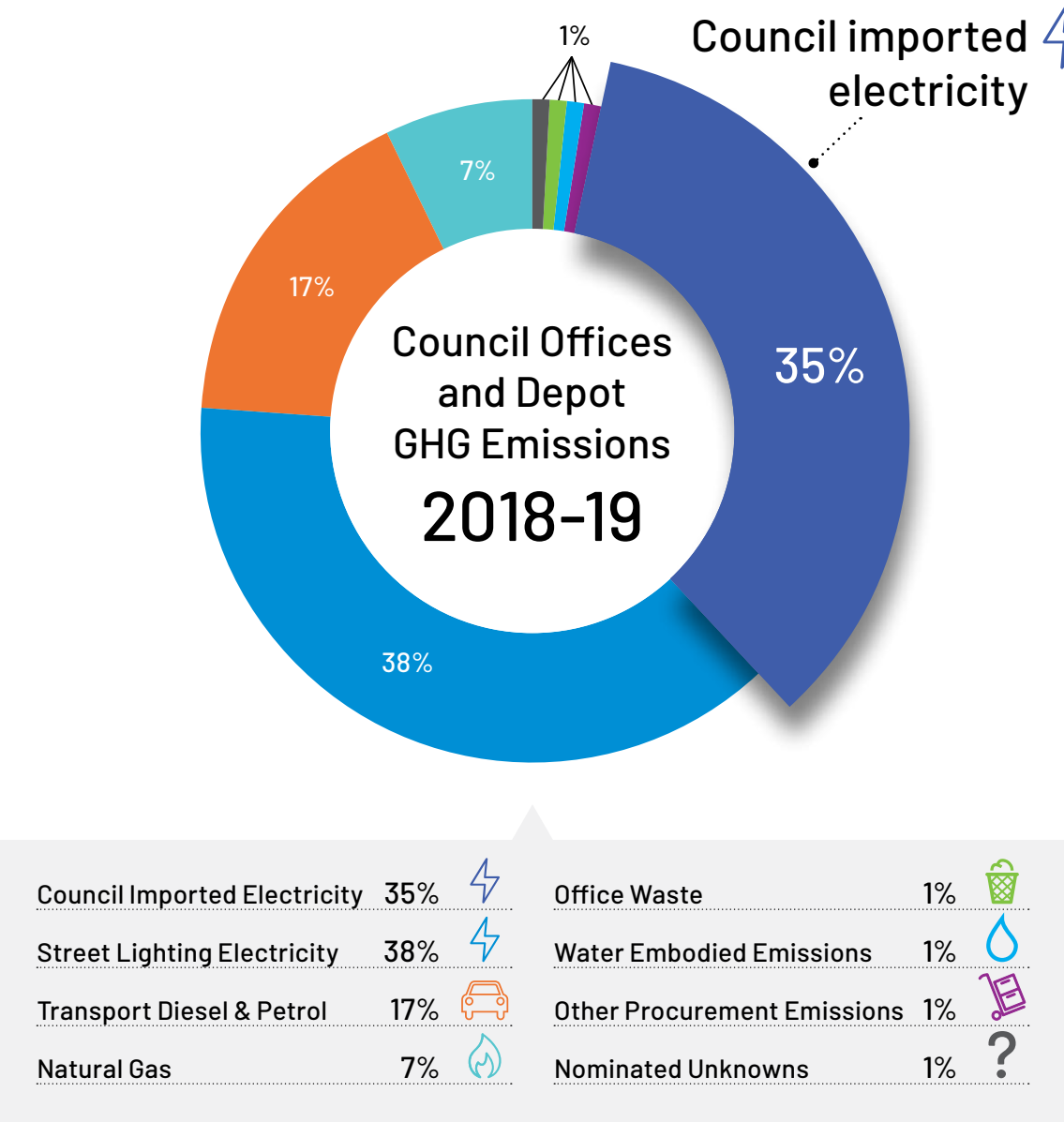
Energy and energy efficiency reports have been undertaken for a number of Gawler’s larger buildings and operational sites. These reports have led to a number of important improvements including the installation of solar systems on the Gawler Administration Centre and Gawler Sports and Community Centre.

There are opportunities to implement more of the energy efficiency opportunities at the sites where investigations have been undertaken, and to address the Gawler Depot and other smaller sites and buildings. The outcome of a public lighting LED upgrade project will be to change what is currently the largest source of council operations GHG emissions to be zero net emissions.

### Street Lighting GHG Emissions



Electricity emissions - Council Offices and Depots



The Town of Gawler’s second largest source of GHG emissions is related to the electricity that is consumed in its offices, depots and community buildings, including the Civic Centre, Gawler Administration Centre, Sports and Community Centre, the Gawler Swimming Pool and the Visitor Advisory Centre.

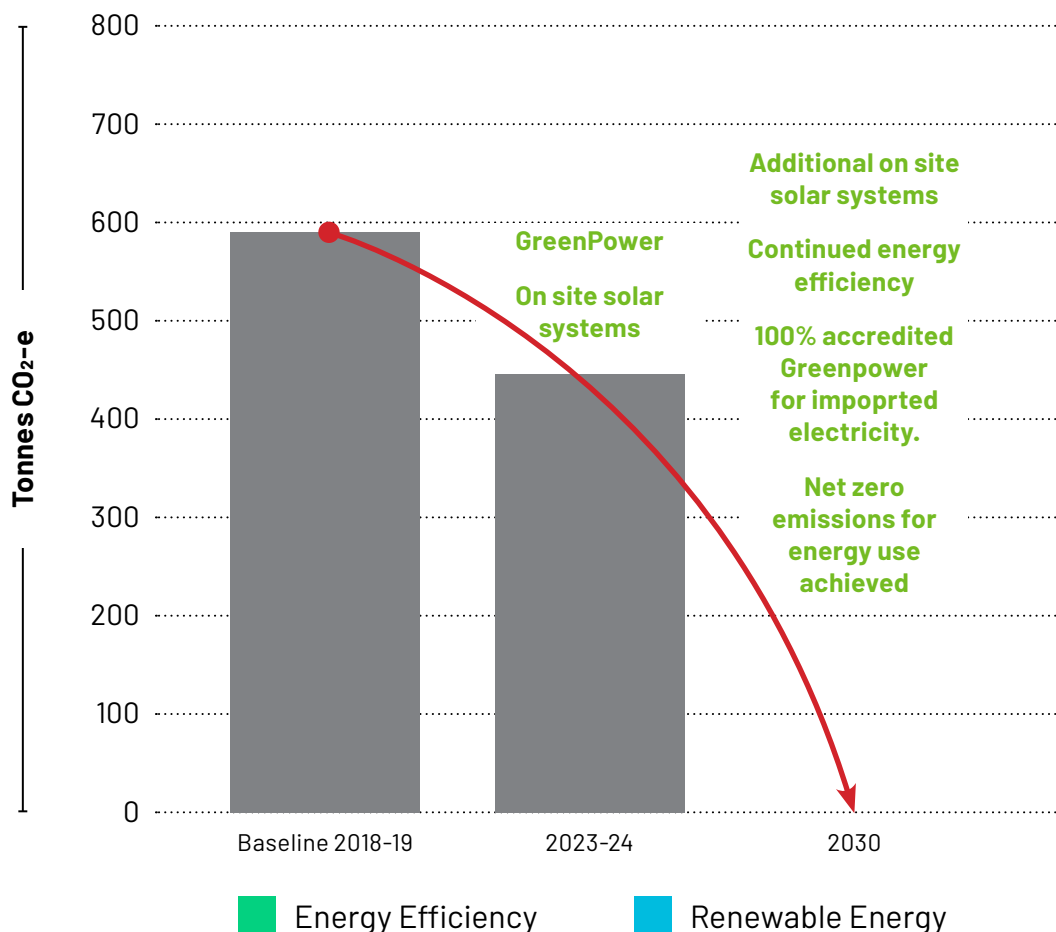
The electricity is consumed for lighting, air conditioning and space heating, hot water services, refrigerators, printing and photocopying, powering equipment and appliances, and in maintenance and repair operations.

## STRATEGY

To address this segment of Gawler's emissions which is nearly 40% of the operational emissions of Gawler Council, the strategy is to make a significant improvement in energy efficiency and transition to renewable energy for the remaining electricity still required.

An energy efficiency upgrade program will support the town of Gawler's transition to lower emissions and renewable electricity. Every kWh of electricity not used or required results in a direct recurrent cost savings. Efficiency activities will be prioritised where biggest gains can be achieved. For example the following approach to focus on energy efficiency in offices and depots in the short term, will make it easier to address remaining emissions through purchasing renewable electricity.

### Office and Depot Electricity GHG reduction



The outcome of energy efficiency actions and increasing the use of renewable electricity will be that electricity use for the council buildings and depot create net zero emissions.

# Renewable electricity for Council

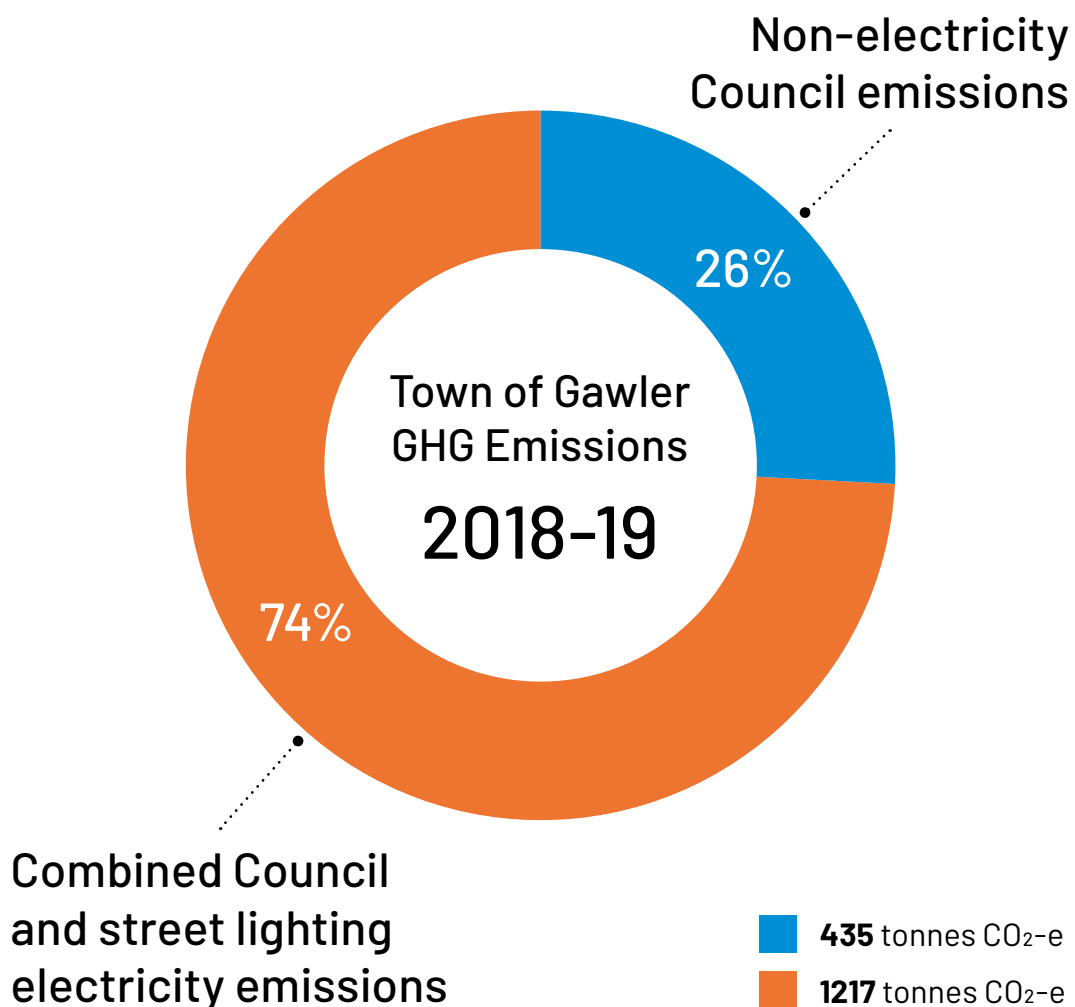
## GOAL 8

**100% renewable electricity use by Council by 2023**

Council operations requiring electricity will be powered by a combination of on site and purchased accredited renewable electricity.

## ACTIONS

- 8.1** Commit to a transition pathway to 100% renewable electricity by 2023 through the purchasing of accredited GreenPower and/or onsite and local renewables development.
- 8.2** Investigate options to continue a program of on-site and off-site renewable electricity options to contribute to council's 100% renewable transition.





## CONTEXT

The chart on the previous page shows that most of the emissions associated with council operations are associated with the use of electricity.

Electricity is purchased via the Local Government Association collective Power Purchasing Agreements with two suppliers, one for large sites that consume greater than 160 MWh/year, including its street lighting, and another for its smaller below 160MWh sites.

Gawler purchases approximately 10% of its electricity as accredited of approximately 130 kW capacity. To meet 100% (net average) of its electricity needs Council would require 1,500 kW of solar/renewable electricity in total.

Council sites do not have any substantial backup power in either on site generators or battery systems, but there are limited Uninterruptible Power Supply (UPS) units for some computer systems.

## STRATEGY

The strategy for the Town of Gawler Council to transition to 100% renewable electricity is to:

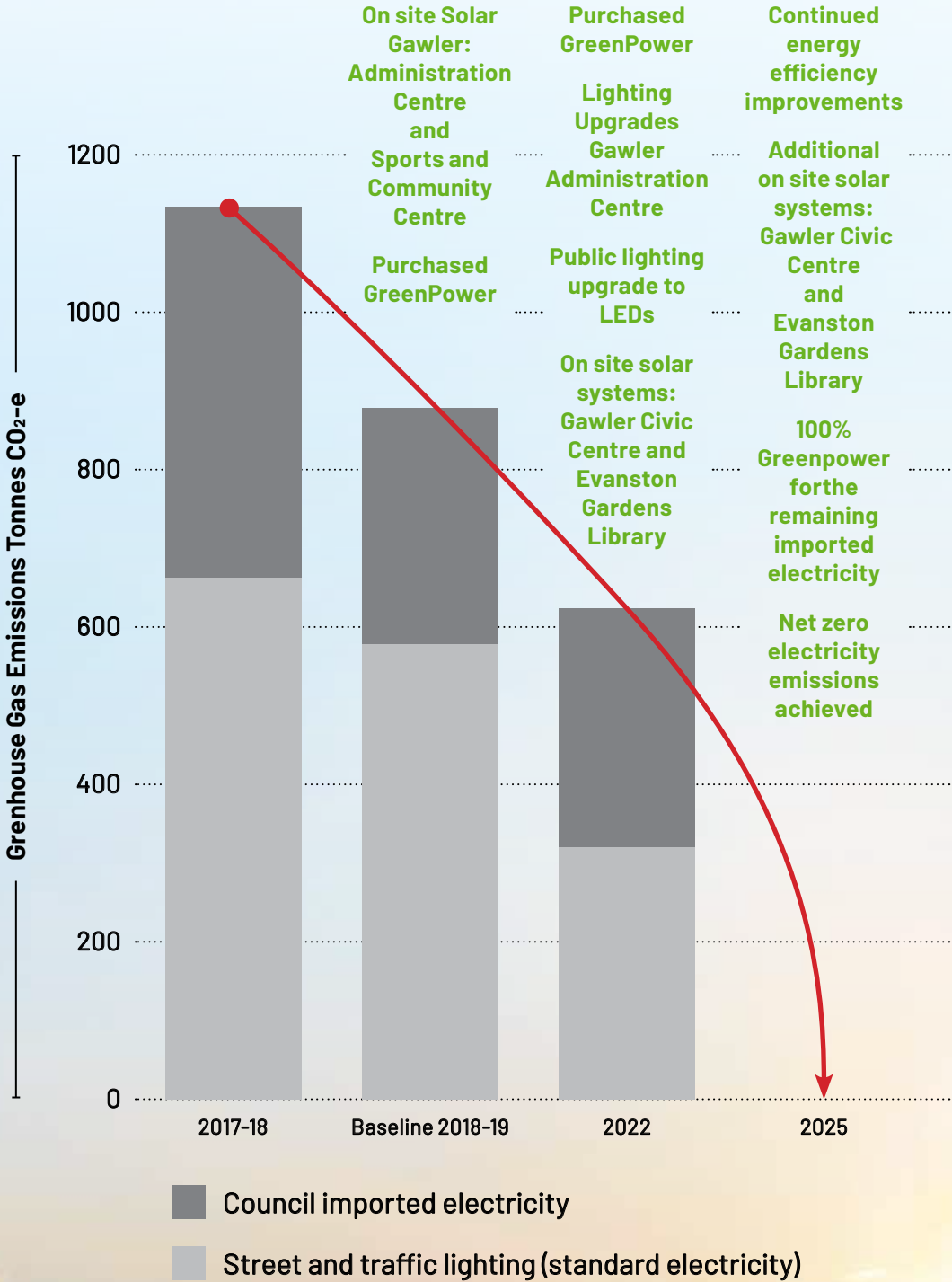
- Implement energy efficiency measures across council buildings and operations (already described);
- Increase on site and local renewable electricity projects towards meeting 100% of council needs by 2030;
- Purchase accredited GreenPower, and;
- Undertake financial evaluation for initiatives that would enable council to achieve 100% electricity use.

## How we will approach our renewable electricity transition

The rules and issues for establishing on site renewable electricity and purchasing accredited renewable electricity are complex and are likely to continue to change.

- Council has undertaken a feasibility study for continued development of on-site renewable energy infrastructure to contribute towards 100% renewables. The Renewables Plan and Program Report (2021) will inform budget planning for over the next 5 years on where to target on site renewable projects. The feasibility study has considered at a high level:
  - how much on site renewable electricity could be produced and from which buildings and sites;
  - options to incorporate emergency backup power (batteries, a generator or both) at the Gawler Sport and Community Centre and consider opportunities at other sites;
  - initial project cost and savings assessment;
  - the role of collaborations and partnerships;
  - assessment of a larger scale solar farm proposal, and;
  - future opportunities in the region.
- Current on-site renewable electricity can meet approximately 15% of council needs. For the remainder, the solution is to purchase accredited renewable electricity via the grid.
- In the short term, the Town of Gawler will advocate for reforms in accredited renewable electricity, so that renewable electricity use is properly defined in law, and that fair pricing structures are available to all consumers.
- As council self-produced renewable electricity increases, the need to buy accredited renewable electricity from the grid will decrease.
- Affordable renewable electricity will enable the Town of Gawler to:
  - Reduce its scope 2 electricity emissions to zero;
  - Transition its vehicle fleet towards being all electric powered by renewable electricity, and;
  - Replace natural gas imports with electricity solutions that can be powered by renewables.

Renewable electricity transition



# Transitioning gas to renewables

## GOAL 9

### Zero use of natural gas and liquid petroleum gas by 2025

As natural gas and liquid petroleum gas are fossil fuels, the only practical way to eliminate emissions from these sources is to transition to renewable electricity.

## ACTIONS

- 9.1 Install alternative heat pump/solar/electric and insulation options for the heating of the public swimming pool by 2023/24 off season.**
- 9.2 Transition all sites away from gas to all electric technology options (by 2030).**

Piped natural gas represents approximately 7% of Gawler's total emissions gas. There is a much smaller proportion of gas usage associated with cylinder LP Gas usage.

## CONTEXT

The major site where piped gas is consumed is for the Gawler Swimming Pool. A preliminary report has estimated that a switch to heat pumps for pool heating would have the following benefits:

- Significant reduction in energy consumption;
- Significant reduction in emissions (if normal grid electricity consumed);
- Potential reduction in energy cost, and;
- Less emissions of other harmful pollutants such as NOx and particulate matter 2.5.

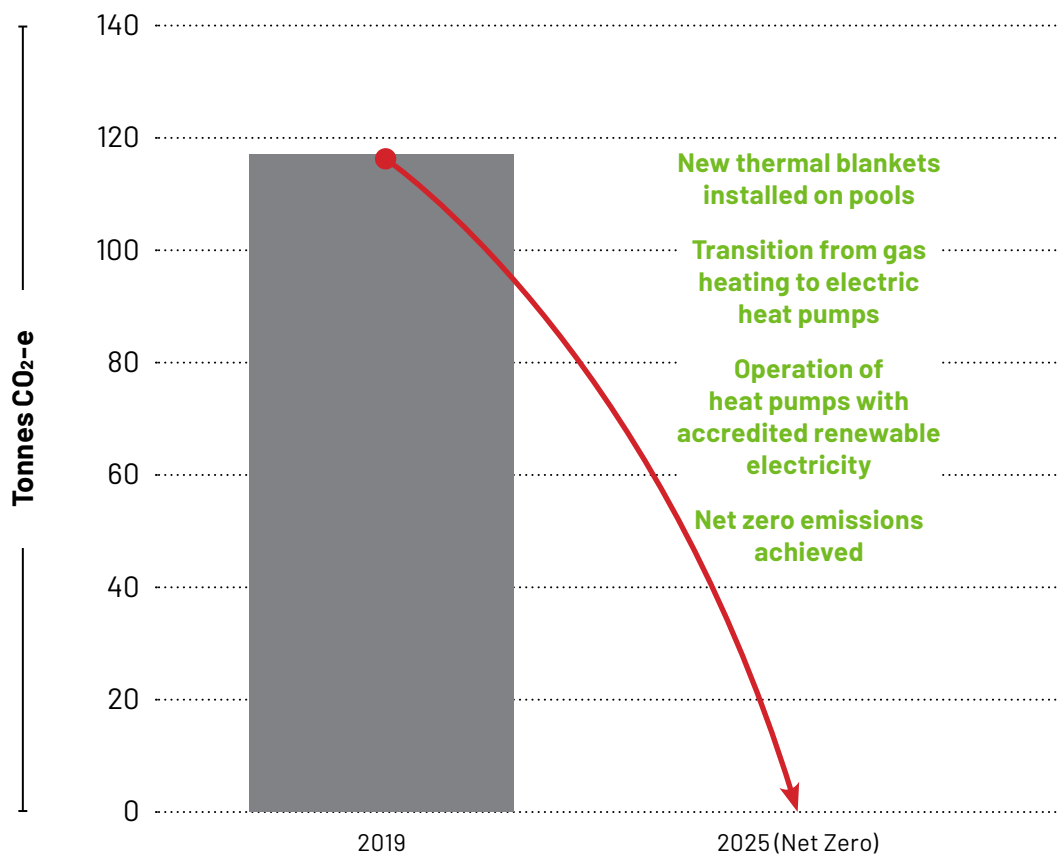
## STRATEGY

To transition to solar and electric heating, a detailed design of an upgrade to the pool heating infrastructure will be undertaken in 2022.

Subject confirming a final design, the aspiration is to adopt heat pump technology as the primary heating source. The current gas heating system may be maintained for some time to serve in limited use as a backup system and pre-season heating if necessary.

Heat decarbonisation will ultimately require the decarbonisation of all forms of heating.

### Reducing emissions from pool heating



The outcome of these actions will be to achieve more efficient management of pool heating, less energy required overall and a pathway towards net zero emissions pool heating by 2025.

The outcome of these actions will be to reduce this large source of non-electricity GHG emissions to zero.



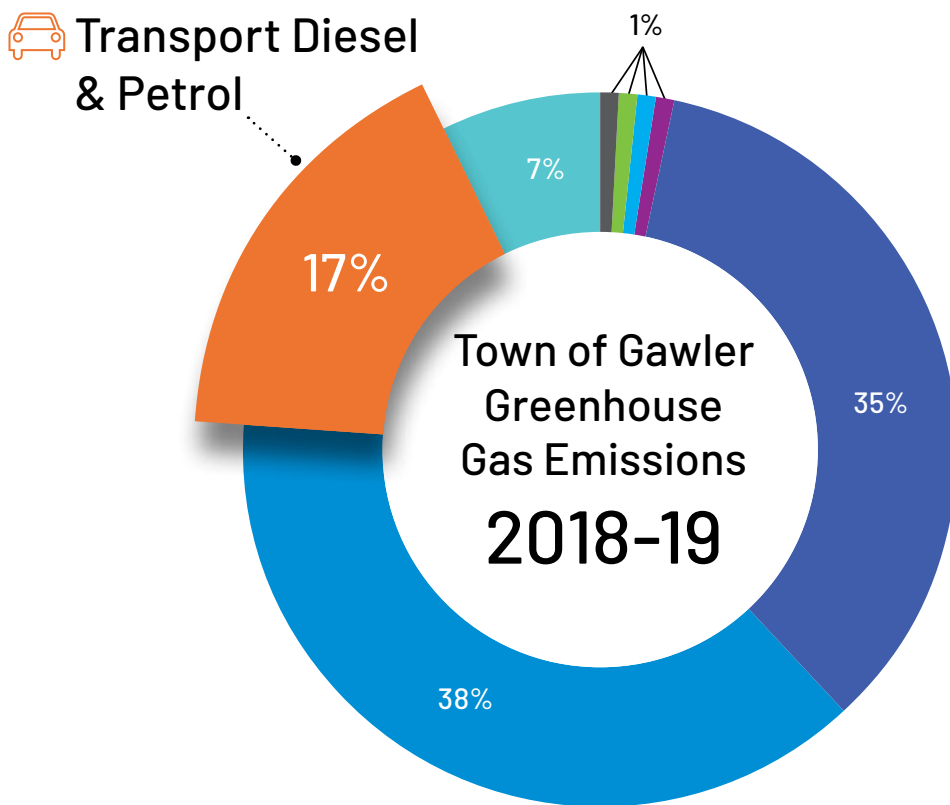
# Transport fuels

## GOAL 10

### Council to transition its fleet to electric vehicles by 2030

This goal will be achieved by establishing targets to transition the vehicle fleet to electric vehicles (EVs) as they are replaced. Initially Council will focus on switching light vehicles to electric vehicles, beginning with trials from 2022/23 and by 2025 the default procurement policy will be that all new light vehicles must be electric unless there are special circumstances.

Heavy vehicles typically have a longer asset life and are sometimes built for special purposes so it will take longer to transition these across. The goal is for all new heavy vehicles to be purchased as EVs from 2030 unless there are special circumstances, which may mean that some internal combustion engine vehicles may be used for longer until they are retired.



Council Imported Electricity	35%	⚡
Street Lighting Electricity	38%	⚡
Transport Diesel & Petrol	17%	🚗
Natural Gas	7%	🔥

Office Waste	1%	🗑️
Water Embodied Emissions	1%	💧
Other Procurement Emissions	1%	🛒
Nominated Unknowns	1%	?

## ACTIONS

- 10.1 Establish a trial of fully electric vehicles for the light vehicle fleet.**
- 10.2 Ensure that for every vehicle due for replacement a life cycle cost comparison is undertaken between an EV and fossil fuel powered option.**
- 10.3 Develop a costed EV transition plan (including a recharge strategy).**
- 10.4 From 2025, Gawler will implement a default procurement policy for all new light vehicles to be electric.**
- 10.5 From 2030, Gawler will implement a default procurement policy for all new heavy vehicles to be electric or an equivalent zero carbon technology such as renewable hydrogen.**

## CONTEXT

The Town of Gawler has a vehicle fleet of light and heavy vehicles that is mostly powered by fossil fuels. Within this fleet it has two hybrid electric/petrol passenger vehicles and another plug-in hybrid electric/petrol passenger vehicle. The Council has demonstrated its interest in switching to electric vehicles and has purchased some hybrid vehicles but is unsure of when to begin making the transition to full electric vehicles.

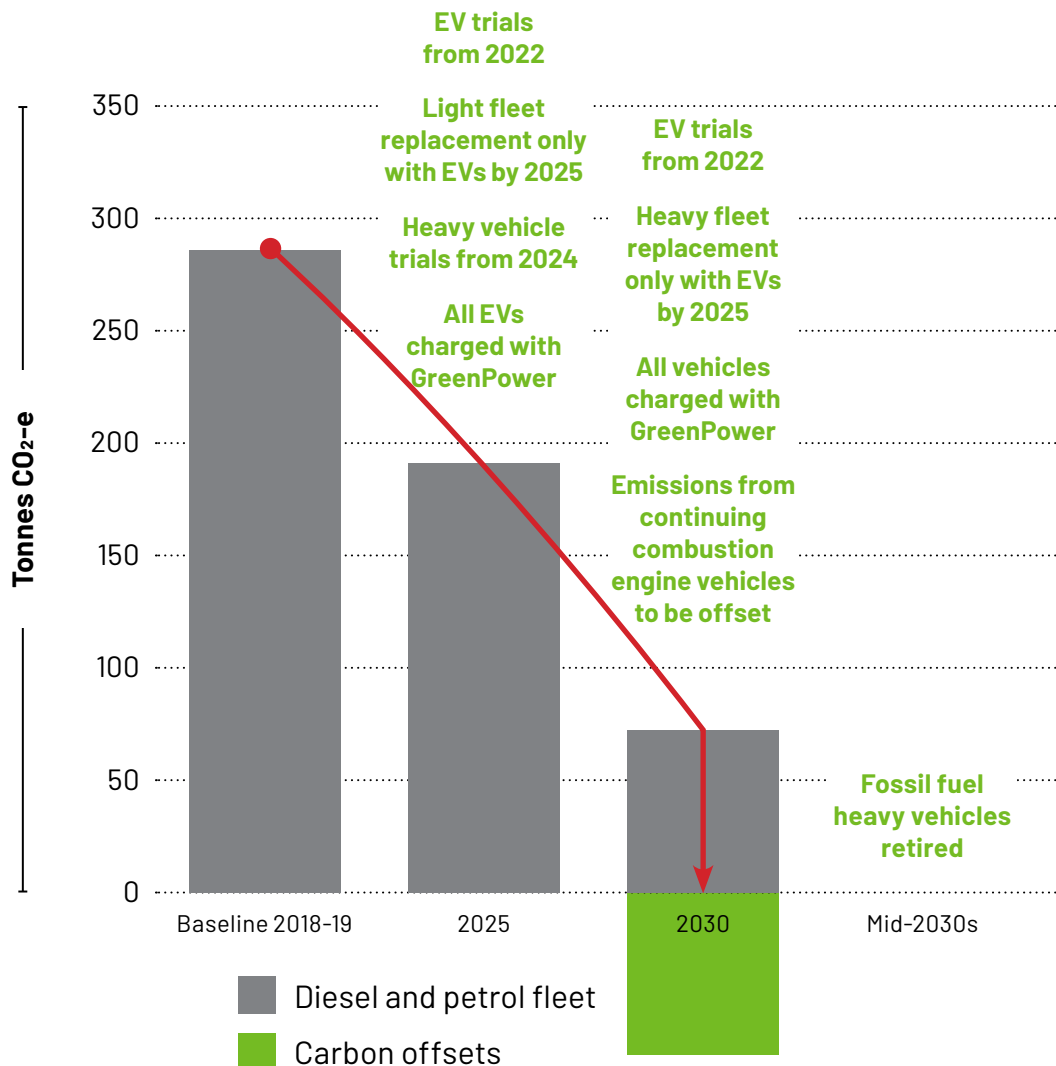
In evaluating the costs and benefits of the transition, there is a need to enhance the financial comparisons between EVs and fossil fuelled vehicles and ensure that all assumptions are transparent, understood and agreed. There are many cost factors that vary between electric vehicles and fossil fuel powered vehicles, but care and transparency is required when compiling these costs so that a life cycle comparison can be made. Cost inputs include:

- Purchase price (Exc GST) - EV vs fossil fuel option;
- Residual value/depreciation;
- Registration, stamp duty and insurance;
- Tyres and servicing;
- Fuel costs or electricity costs (L/100 km or kWh/100km), and;
- Life cycle GHG emissions.

## STRATEGY

To transition to electric vehicles and machinery by a change to procurement policy. Continue to monitor alternative zero emission solutions that may become feasible such as hydrogen fuel cell vehicles powered by renewable hydrogen’.

### Transition to electric vehicles with renewables



The outcomes of this strategy will be the elimination of fossil fuel use, and the additional electricity load would be provided via accredited renewables. Please note that there will be a lag time as existing fossil fuel vehicles will be retired when their useful life is has ended.







# Greening of Gawler

## GOAL 11

**Establish a greening of Gawler policy to increase tree canopy cover from 15% to 30% by 2045 and enhance greening and biodiversity outcomes, supported by water sensitive urban design**

The greening of Gawler, supported by Water Sensitive Urban Design (WSUD) is an essential contribution to adapt to hotter climates with longer periods of heat and water scarcity.

## ACTIONS

- 11.1 Establish sufficient plantings on council land and encourage greening on private land by 2030, that will result in 30% tree canopy cover by 2045 when the trees have matured.**
- 11.2 Review infrastructure project checklists to ensure that WSUD elements are sought and integrated into hard and soft infrastructure projects and renewals.**
- 11.3 Establish 20 small and medium scale WSUD sites to demonstrate:**
  - ☐ Kerbside water inlets;
  - ☐ Permeable paving;
  - ☐ Permeable asphalt, and;
  - ☐ Rain gardens
- 11.4 Continue to investigate and establish recycled water and establish harvested stormwater systems to supplement or replace mains water on council irrigated sites.**
- 11.5 Become a member of Water Sensitive SA.**
- 11.6 Investigate ways to create micro rewilding sites with native gardens and shrubs.**



## CONTEXT

Where land is cleared of vegetation and replaced with bare ground, bitumen or paved surfaces, the landscape loses its ability for cooling through evapotranspiration. Dark building and infrastructure materials absorb heat that builds up and may be slow to re-release. The urban heat mapping undertaken across metropolitan Adelaide in recent years has highlighted the extent to which urban areas are now hotter during summer, and where this is occurring down to the scale of single trees and buildings.

This is known as the urban heat island effect and can occur not just at the scale of cities, but also at a suburb scale.

On the positive side, results from suburban remote sensing and ground air temperature measurements show that where there is healthy green canopy cover of overlapping trees, gardens and understory plants, the microclimate in streets and around buildings can be ten degrees Celsius cooler compared with unshaded areas.

The State Government has recognised that the continuing loss of trees and canopy cover across Adelaide is not sustainable and has set a goal to increase urban canopy and green cover to 30% by 2045. Gawler has been assessed as having approximately 15% canopy cover overall.

To support urban cooling in summer, biodiversity and enhance the amenity of Gawler, a target of doubling canopy cover by 2045 has been identified and to achieve this target, there is a need to get sufficient plantings established by 2030, to reach the target as trees mature, whilst also enhancing ground covers and shrubs.



## **Better management of piped mains water and stormwater through Water Sensitive Urban Design (WSUD)**

In a climate with greater water scarcity, it will be essential to maximise the use of water sensitive urban design to replenish soil moisture and keep trees and gardens healthy. WSUD is a key to greening the urban environment to support cooler microclimates.

Gawler has embraced small to medium WSUD infrastructure and solutions but there are many further opportunities. To date, recycled water from the Northern Adelaide Irrigation Scheme (that is, the recycled water from the Bolivar Recycled Water Treatment facility), extends only to the southern border of the Town of Gawler.

WSUD is particularly important where there are large areas of pavement or compacted soils that cause water to runoff to stormwater systems rather than infiltrating into the soil profile leading to long term or permanent water deficiency. Where the soils are dry trees are not healthy and there will be insufficient canopy cover and cooling.

WSUD techniques from a micro scale such as a kerbside water inlets into a porous in -ground chamber, to the larger wetlands with aquifer replenishment or Aquifer Storage and Recovery (ASR) systems can all help to keep existing trees healthy or support new trees and gardens to become established.

WSUD is about managing and using urban stormwater and mains water wisely for multiple benefits including:

- Climate change adaptation;
- Improving biodiversity habitat for urban wildlife including birds and insects;
- Minimising the severity of urban stormwater run-off;
- Reducing pollution into creeks and the Gawler River;
- Improving the health of our urban soils;
- Optimising amenity, liveability and neighbourhood character. Increased property values and other positive impacts on wellbeing, and;
- Low cost options to deliver multiple outcomes.



The Town of Gawler is well placed to continue the mainstreaming of WSUD and, by collaborating with government, developers and other stakeholders, to achieve shared goals to increase canopy, green cover and urban biodiversity, all of which are critical to climate adaptation and creating liveable spaces. By understanding that many WSUD benefits can be monetised, the business case to incorporate WSUD solutions in site specific projects is strengthened and the need to strive for multiple benefits is better understood. It is however important to strive for the simple solutions that may not result in additional costs but can lead to much improved outcomes. These may include ensuring the levels are correct for rain to water gardens before spilling to stormwater, incorporating kerbside water inlets for new trees and to keep iconic trees healthier, and adopting permeable pavements and road materials.

For small scale WSUD infrastructure and elements which can be achieved through standard designs, bulk supply and install procurement can assist in the mainstreaming of WSUD outcomes at substantial cost reductions per unit. This approach may include partnering with other councils.

## STRATEGY

The Town of Gawler will by default, consider site specific WSUD projects occur when street upgrades, stormwater management projects, irrigation works and other civil works are being undertaken. Investigate extending and combining the Greening of Gawler Policy to Sustainability and Greening of Gawler Policy to underpin engagement with developers and other stakeholders, to collaborate on achieving more than minimum planning system requirements.



# Procurement of goods and services

## GOAL 12

To be a leader in procurement of low carbon goods and services, precluding single use plastics, eliminating waste and maximising circular economy outcomes

Council will consider its procurement decisions reflecting our climate emergency, sustainability and zero waste objectives.

## ACTIONS

- 12.1** Review the *Council Procurement Policy* to ensure that it is consistent with responding to the climate emergency.
- 12.2** Incorporate whole of life costing evaluation in major purchase decisions.
- 12.3** Increase purchasing of low carbon and recycled products and infrastructure materials.
- 12.4** Support the Northern Adelaide Waste Management Authority (NAWMA) to increase diversion of organic waste from landfill and maximise circular economy outcomes.
- 12.5** Continue to eliminate sources of single use plastics.
- 12.6** Establish a zero-waste strategy for Council operations.
- 12.7** Seek to reinvest efficiency outcomes and cost savings from actions into climate change actions.
- 12.8** Trial a carbon neutral event or events for Council.

## CONTEXT

The Town of Gawler purchases a large number of goods and services that are associated with upstream scope 3 emissions. These can include road and civil construction materials, building construction materials, office computers, equipment and stationery.

The Town of Gawler produces waste and seeks to minimise its waste and impacts.

- Playing an active role in co-owning and supporting the Northern Adelaide Waste Management Authority and its innovation to reduce the amount of waste going to landfill, increase waste used for recycling and to develop new recycled products and markets. Achievements to date include:
  - Reducing the weekly waste bins at the Town of Gawler Administration Centre from six bins to two bins;
  - A policy for no single use plastics to be used in events, and;
  - Increasing recycled road and civil materials.
- Considering the recyclability of products they purchase and its packaging;
- Sorting recyclables out of the roadside collection waste to landfill bins (red bins); and
- Making full use of the yellow recycling bins.

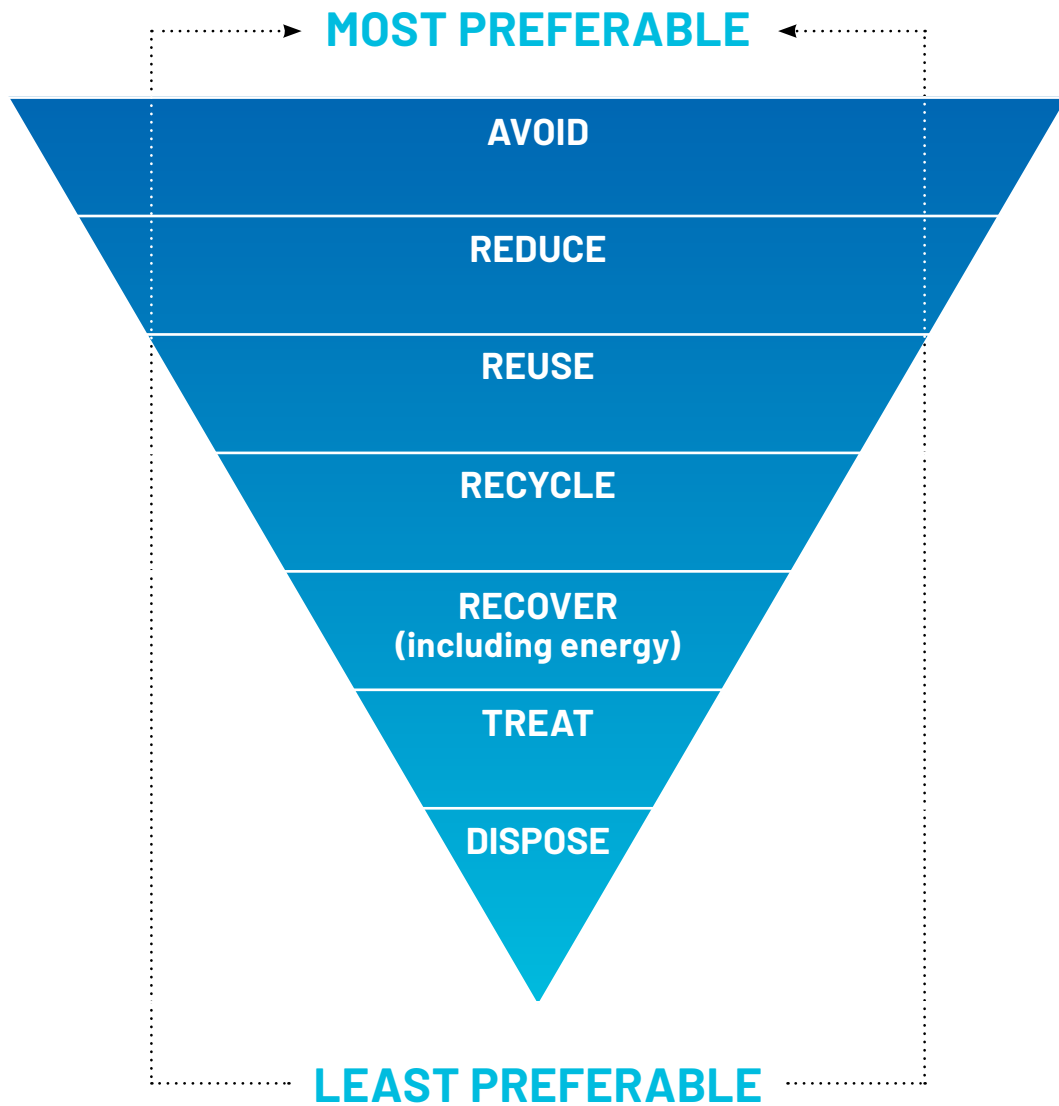


## STRATEGY

To make purchasing decisions consistent with taking action in a climate emergency:

- Consider the embodied greenhouse gas emissions when procuring goods and services (preliminary assessment);
- Consider whether there are lower emission choices, such as using products with a higher content of recycled materials;
- Consider the assurance of other social and environmental sustainability aspects of procurement of low carbon goods and services (mining, manufacturing and human rights practices) in collaboration with state and federal agencies;
- Purchasing goods and services that are accredited as carbon neutral or carbon offset;
- Pursue zero waste and circular economy objectives;
- Examine opportunities through the Barossa Regional Procurement Group (BPRG) to improve procurement of goods and services across a regional level;
- Collaborate with the Northern Adelaide Waste Management Authority on circular economy initiatives that will assist diverting waste from landfill and providing the Town of Gawler with recycled materials and products;
- Explore opportunities for improved recycling of materials from projects collected at the Gawler Works Depot;
- Explore improved reuse and recycling options for:
  - mobile phones, laptop devices, e-waste and rechargeable batteries
  - electric vehicle batteries;
- Enforce the Town of Gawler's ban on single use plastics through safe alternatives and engage with suppliers on eliminating single use plastic wrappings on products purchased by Council, and;
- Have regard to the waste mitigation hierarchy in Council's general operations and decision making.

## Waste Mitigation Hierarchy (SA EPA<sup>[11]</sup>)



<sup>11</sup> Waste Management Hierarchy [https://www.epa.sa.gov.au/environmental\\_info/waste\\_recycling](https://www.epa.sa.gov.au/environmental_info/waste_recycling)

## CASE STUDY

### **Northern Adelaide Waste Management Authority (NAWMA)**

Council's subsidiary, NAWMA, has been leading the way with the provision of nationally recognised best practice waste management and resource recovery services. The 'China Sword Policy' brought forward drivers of change to recycling and NAWMA responded with the introduction of innovative resource recovery opportunities designed to keep waste out of landfill. NAWMA's response to the circular economy is examining modern production processes which generate waste as a by-product.

NAWMA has invested in modernising its Materials Recovery Facility (MRF) to manage recyclables in a manner that shows manufacturers and organisations that it is possible to be more efficient and less wasteful by developing processes that emulate more 'circular' natural systems.

In addition, through NAWMA's community and business education programs, information is provided to assist low waste generation when items are manufactured using smart design and the efficient re-use of components.

Council and NAWMA have embraced circular economy practices to extract the maximum value from discarded items and support the local processing of recovered materials.

To date the participation in the circular economy through the use of recycled materials includes:

- Capturing landfill gas and using it for electricity co-generation with a large solar panel system established on the same Uleybury site, and;
- Processing a range of materials (including plastics, aluminium, steel and glass) for use as secondary raw materials.



Two waste/recyclable streams for low grade plastics and (undersize) glass are also prioritised for Council's future circular economy agenda as it relates to civil and street/park amenity infrastructure.

The Town of Gawler procures recycled plastic products for provision of new park tables, seating and fence posts each year as part of its Open Space and Recreational Assets renewal budget.

Building resilience to the climate emergency through the circular economy will require further funding and investment, both now and into the future. The CEAP Working Group understands that tackling the climate emergency will not only require scientific / expert input and data when making decisions relating to the circular economy, but will also place emphasis on the outcomes of stakeholder and public consultation and involvement in decision making.

The opportunities within the circular economy are to decrease the amount of waste going to landfill and greenhouse gas emissions, and to increase employment and economic development across the sector within the northern region.



# Climate risks and adaptation

## GOAL 13

**To establish a best practice approach in identifying and managing climate change risks for Council and our community**

Town of Gawler senior staff and Elected Members maintain a thorough understanding of climate risks and appropriate climate adaptation responses to support the resilience of our workforce, the services we provide and our infrastructure.

## ACTIONS

- 13.1 Continue to develop and improve the Town of Gawler's preparedness and resilience to climate change including to cope with:**
  - ☐ Prolonged drought and heatwaves;
  - ☐ Bushfires;
  - ☐ Storm and flooding events, and;
  - ☐ Biological events such as pandemics and plagues;
- 13.2 Participate in a *Corporate Risk and Governance Program* for Elected Members, the Executive and other key staff.**
- 13.3 Audit Town of Gawler Council heatwave preparedness against the *LGA Heatwave Guide for Local Government 2020*.**



## CONTEXT

### Overview – Corporate risk management and governance

The Town of Gawler actively participates in a range of emergency preparedness activities which include:

- Establishing procedures, policies and protocols to support staff and community during extreme events;
- Flood mitigation in partnership with the Gawler River Management Authority and other councils;
- Bushfire prevention planning through the AMLR Bushfire Management Committee;
- Bushfire Prevention Officers working with the community for preparation and compliance;
- Management of bushfire risk on Council lands;
- Heat mitigation policies, and;
- Maintaining the Gawler Sports and Community Centre as a refuge centre during extreme events.

With the increasing frequency and severity of extreme events, Council recognises the need to continuously step up its efforts to enhance its preparedness and response capabilities. This is not an easy task as climate impacts are experienced both directly and indirectly across many parts of our business and the community.

In order to address the changing risk, a whole of business approach is required.

## **Climate change governance assessment and physical risk assessment**

A number of councils have embraced a program for senior Council staff and Elected Members to understand the immediate and long-term governance and risk exposure that a changing climate brings to operational, financial, reputational and resilience of member councils.

The process incorporates:

- Facilitated Climate Risk Initiation workshops;
- Climate Governance Risk Assessments, and;
- Climate Physical Risk Assessments.

The benefits of this approach are that the key decision makers in councils are able to receive, discuss and question the up-to-date climate risk knowledge and understanding best suited to council needs from local government learnings across South Australia and Australia. As some councils have already collaborated in undertaking this program, the costs are known and there are opportunities for collaboration with other nearby councils.

## **Emergency management response**

The Town of Gawler supports the emergency management arrangements in South Australia and has a particularly important role to play in mitigating risk, supporting emergency services agencies in response to an emergency and supporting the community during recovery.

The Town of Gawler works closely and collaboratively with agencies when dealing with emergencies.

The State Government's *Disaster Resilience Grant Funding Program* provides Council secured funding to assist with the implementation of an interactive online local emergency management and information sharing portal. The portal could provide up-to-date information concerning emergency risks such as fire, flood and catastrophic events to the community.

The purpose of the additional funding support was to enable and support community engagement and participation in emergency management and provide advice such as:

- Knowledge of the emergency risks that exist in the Town of Gawler;
- Information to support the role that each member of the community can have in an emergency;
- An online platform to connect with each other and Council before, during and after an emergency, and;
- The ability to support each other to become resilient in an emergency event or disaster.

The information will assist the community to better understand their risk profile.

Council has engaged Local Government Risk Services (LGRS) to facilitate the development of the *Community Emergency Management Plan*, it is envisaged that this plan will support communities and organisations to:

- Be better connected – before, during and after emergencies;
- ‘Map’ the local community profile and priorities;
- Understand local priority hazards and solutions;
- Better prepare, respond and recover, and;
- Aim for a long-term resilience.

A key part of the approach and development of the plan is a five-step process that includes:

- Connecting people;
- Gathering local knowledge;
- Understanding hazards and risks;
- Developing goals and solutions, and;
- Continuing to learn, share and improve.

Effective emergency management involves community members playing their part in each stage of the process when it comes to preventing, preparing for, responding to and recovering from emergencies. This can be done by individuals understanding their exposure to risk by accessing information resources available through government, non-government agencies and community organisations in terms of planning and preparation for protecting life and property. It involves becoming aware of the potential threats in localities and environments and is increased by familiarising with local community emergency management arrangements.

Council policies and procedures in responding to emergencies must reflect collaborative processes that ensure the involvement of state and local agencies and community groups.

## **Priority areas**

### **Heatwave preparedness**

The risk of increasing frequency, length and duration of heatwaves is a growing problem for the Town of Gawler. During heatwaves, there is a dramatically increased risk for council staff, community, Council, community and government support services, managed open spaces, trees and wildlife.

Currently, Council has in place preparedness strategies and thresholds to manage its activities during these events, which may cause the stopping of various outdoor activities and services, whilst other contingency plans may be implemented to provide additional services where required.

The Town of Gawler acknowledges that as heatwaves become more frequent, severe and longer, that current preparedness, engagement with agencies or service providers and contingency plans may need to be strengthened.

The good news is that the Local Government Association and other councils have already been addressing this problem have released a *Heatwave Guide for Local Government (2020)*<sup>[12]</sup>. An efficient way to address the growing risk of heatwaves will be for the council to audit its response preparedness and contingency plans against the new heatwave guide to identify and strengthen its capabilities.

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<sup>12</sup> Access the Heatwave Guide for Local Government via: [https://safecom-files-v8.s3.amazonaws.com/current/docs/2020\\_LGA\\_HeatwaveGuideforLG.pdf](https://safecom-files-v8.s3.amazonaws.com/current/docs/2020_LGA_HeatwaveGuideforLG.pdf)



## Flood events

Climate change results in increased and more severe rain events. The Town of Gawler has played an active role in flood mitigation schemes to reduce the impact of flood on communities in flood risk areas such as the river and stream corridors and to the plains areas adjacent to the Gawler River. However, the risks of flooding to properties and buildings located in flood prone areas cannot be eliminated. Flooding is described in terms of frequency within a given timeframe, such that a one in ten (1/10) year flood is a statistical assessment of the scale of a flooding event that could be anticipated in a rolling ten year period. A one in a hundred year flood (1/100) is an assessment of the scale of event that could be anticipated in a rolling 100 year timescale.

However, it may still be possible to get two or more events close together, such as two or three 1/10 year floods within a few years due to natural variability in climate conditions and weather. The impact of climate change may also create the conditions for more frequent and severe flooding.

## STRATEGY

The strategy is to review and take action to strengthen the Town of Gawler's preparedness and contingency plans against recognised best practice guides and Codes of Practice covering such as for emergency response, bushfire preparedness and the *LGA Heatwave Guidelines*, and to undertake pre-event scenario drills and after event reviews to ensure that the Town of Gawler's preparedness is up to date.

Explore biodiversity opportunities in Council open spaces where the planting of appropriate native species can reduce fuel loads (for example, native grasses are less flammable compared with dry phalaris grass and wild oats).



# Implementation, Monitoring and Review

# Assuring progress

## GOAL 14

**Implement the CEAP, monitor outcomes  
revise and improve to assure its effectiveness**

The Council will establish and implement this Plan by delivering its actions on time, update near term actions on an annual basis, lead in advocacy, and undertake a major review in 2026.

## ACTIONS

- 14.1 Prepare a Climate Governance and Accountability Plan that will guide our public reporting and transparency in how we respond to the climate emergency and report progress to implement our CEAP.**
- 14.2 Monitor community scale emissions whilst continuing to broaden and improve greenhouse and renewable accounting methods.**
- 14.3 Continue to advocate that local, state and federal governments and organisations declare a climate emergency and take urgent action to reduce emissions.**

## STRATEGY

The Town of Gawler will prepare a Climate Governance and Accountability Plan and report progress on an annual basis in accordance with the accountability plan.

The accountability plan will be established to guide the implementation of the CEAP, measure progress, ensure appropriate reporting and make changes and updates as necessary.

Each goal will have a clearly defined set of actions, milestones and measures of success. The CEAP will be updated on an annual basis reflecting agreed operational and budgeting priorities.

Annual progress report will include as a minimum:

- A greenhouse gas emissions report;
- A consumption of resources report;
- A renewable electricity production and consumption report, and;
- An update of yearly climate emergency action progress, key decisions, issues and opportunities.

Progress against the plan will be reported annually to Council, the community, Gawler Youth Advisory Committee, and other stakeholders.





# Appendices

# APPENDIX 1

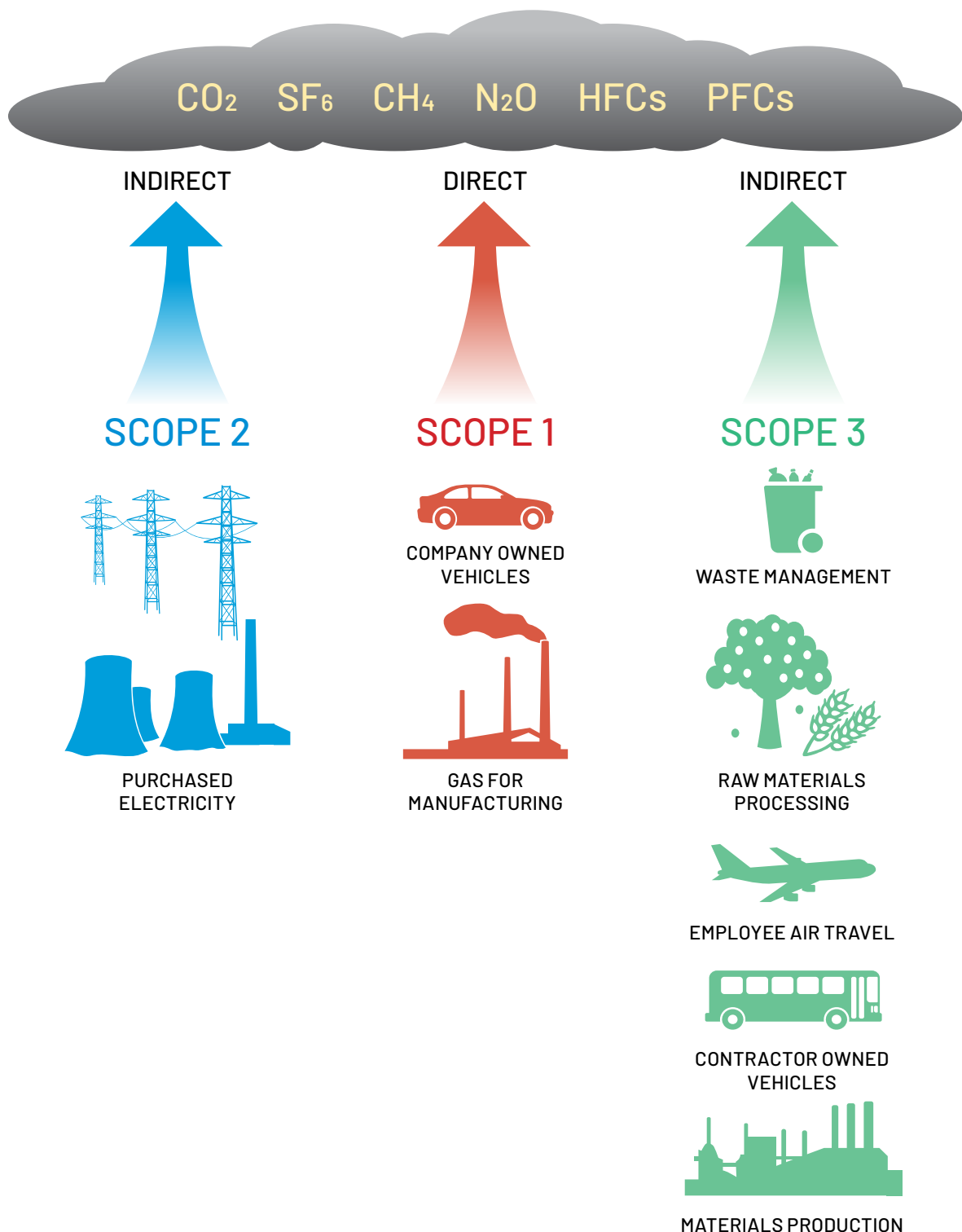
## Terms and definitions

<b>CEAP</b>	Climate Emergency Action Plan
<b>Climate</b>	The regular pattern of weather conditions of a particular place (Oxford Dictionary).
<b>Climate change</b>	Changes in the earth's weather, including changes in temperature, wind patterns and rainfall, especially the increase in the temperature of the earth's atmosphere that is caused by the increase of particular gases, especially carbon dioxide (Oxford Dictionary).
<b>Climate emergency</b>	A situation in which immediate action is needed to reduce or stop climate change and prevent serious and permanent damage to the environment (Oxford Dictionary).
<b>Firming of electricity (contractual)</b>	A process provided by the contractual electricity market for a continuous supply of electricity to a customer from a range of different sources, to cover periods when a single electricity generation source is unavailable.
<b>Firming of Electricity (AEMO)</b>	The Australian Electricity Market operator ensures that there is sufficient electricity generation sources available for continuous electricity supply to all consumers, regardless of the planned or unexpected loss of supply from individual generation sources.
<b>GHG</b>	Greenhouse gas
<b>IPCC</b>	Intergovernmental Panel on Climate Change. A panel of climate scientists and subject experts who provide global synthesis reports on climate change under the UNFCCC.
<b>LGC</b>	Large Scale Certificate - A proof of generation certificate created under the requirements of the renewable Energy (Electricity) Act 2001.
<b>Net Zero Emissions</b>	Net Zero Emissions can be achieved by quantifying the GHG emissions of an organisation reducing emissions as far as possible through using less, purchasing lower emissions products and services (like renewable electricity) and purchasing carbon offsets to address remaining emissions.
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>Weather</b>	The condition of the atmosphere at a particular place and time, such as the temperature, and if there is wind, rain, sun, etc. (Oxford Dictionary)
<b>WSUD</b>	Water Sensitive Urban Design

## APPENDIX 2

### Emission scopes

The following diagram showing sources of emissions defined in three scopes is taken from the New Zealand Business Council for Sustainable Development, *The Challenge of Greenhouse Gas Emissions – An industry Guide* (2002).





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**Gawler**

