

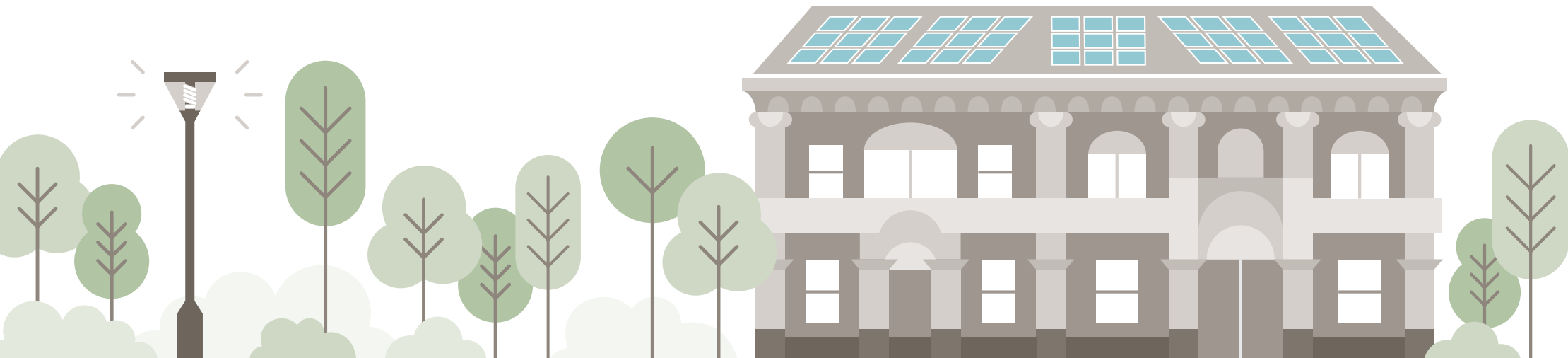


# Climate & Energy Plan

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*Our path to carbon neutral  
operations by 2023*

AUGUST 2021



# Climate & Energy Plan

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*The City of Unley aims to be Carbon Neutral for its corporate emissions by December 2023.*

A carbon neutral target requires greenhouse gas emissions to be reduced as much as possible with the balance that cannot be directly eliminated addressed with the purchase of carbon offsets.

Measures taken to reduce Councils' carbon emissions will have a long-term positive impact on Councils' operating budget by lowering ongoing costs of fuel and electricity, reducing the organisations exposure to volatility in fuel, gas and electricity prices and increasing the resilience of the organisation as we transition to a low carbon economy.

Setting a target provides a framework for capturing the opportunities that are inherent in reducing energy consumption. The target also provides strategic guidance when it comes to allocating resources in future budgets.

On 23 November 2020 the City of Unley committed to become members of the Global Covenant of Mayors for Climate and Energy (GCoM), a global coalition of like-minded council/city leaders who have pledged to reduce greenhouse gas emissions to galvanise climate and energy action across cities worldwide. In joining GCoM, Councils are asked to measure emissions, set targets and develop a roadmap to support the emissions reductions. GCoM currently has more than 10,000 city members, covering a population of nearly 1 billion people. It is expected that these cities will collectively reduce carbon emissions by 24 billion tonnes by 2030.

# Mayor's Message

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I am delighted to announce that Council has committed to be carbon neutral for its operations by December 2023.

This is consistent with the Paris Climate agreement which aims to limit global warming to 2°C by the end of the century.

Climate change is a pressing issue that affects us all. Adelaide has already recorded increases in the long-term average temperature and has experienced more extreme heat days (those over 35C). Under our current emissions trajectory, the CSIRO projects that the number of days over 35C in Adelaide could increase from an average of 17 a year to 23 a year by 2030 and by as much as 36 days a year by 2070 with heat stress, loss of biodiversity, drought and flooding also increasing over time.

Council has been taking action to mitigate climate change for many years with the highlights outlined on page 5. The strength of this new plan is that we have a clear road map to continue reducing emissions and be transparent in reporting our progress.

The technical report that was developed as part of our plan also revealed that more than half of Council's operational emissions come from the materials and machinery we use to provide hard infrastructure such as roads, pavements and stormwater pipes. Therefore, a key focus area for Council will be to collaborate with other cities to identify suitable low-carbon alternatives.

Our plan includes:

- A staged adoption of electric vehicles
- An electrification strategy to progressively switch from gas to electricity for space and water heating
- More solar pv installations including at community centres
- Continued energy efficiency upgrades including LED lighting and building upgrades.
- Sustainable procurement improvements aimed at supporting local low-carbon industry suppliers.



*Michael Hewitson*

Mayor Michael Hewitson AM





# Achievements to date

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*In considering a Carbon Neutral future, we recognise the significant work that Council has already completed and is currently doing to reduce emissions and seek to build upon it.*

- 1 A total of 105kW of solar and a 9.8kWh battery have been installed since 2016.
- 2 Public electric vehicle charging station at Heywood Park funded through Federal grant installed in 2019.
- 3 Replacement of existing Council-owned streetlights to efficient LED lighting in residential streets.
- 4 Energy-efficient upgrades, including a 70% power consumption reduction in the IT server room in 2018.
- 5 Ongoing delivery of the *Walking and Cycling Plan* is encouraging more active modes of transport which in turn reduces car use.
- 6 Six 'e-bikes', funded through State Government grants, are used by Council staff to reduce car trips.
- 7 Council-run events zero waste since 2014.
- 8 Accelerated tree planting program on Council land.

## RESILIENT EAST

*Climate Ready  
Eastern Adelaide*

Since 2012 the City of Unley has been an active partner with Resilient East which is working on landscape-level adaptation for climate change across eight eastern Councils and the State Government. This work focuses on preparing for the changes of climate already locked in and therefore different from reducing emissions which mitigate the causes. However, they are complementary and can leverage off each other.



# Carbon Language

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## **CARBON NEUTRAL**

Over the course of a year, an organisation has accounted for and then “offset” its emissions footprint. Sometimes referred to as Net Zero.

## **CARBON OFFSETS**

Activity that compensates for the emission of greenhouse gases by providing a reduction elsewhere.

## **AUSTRALIAN CARBON CREDIT UNITS (ACCUS)**

Accredited and quality offsets that meet the Australian Governments National Carbon Offset Standard.

## **FOOTPRINT**

Total of all the main greenhouse gas emissions. Carbon Dioxide is the primary one, so for simplicity, the ‘Global Warming Potential’ of each gas is converted to a Carbon Dioxide equivalent (CO<sub>2</sub>-E).

## **SCOPES**

The types of emissions are commonly grouped into three ‘scopes’ based on their similar origin sources. The following definitions are from ICLEI:

- **SCOPE 1**  
Direct emission sources owned or operated by the local government (eg fuel, diesel and gas).
- **SCOPE 2**  
Indirect emission sources limited to electricity.
- **SCOPE 3**  
All other indirect and embodied emissions over which the local government exerts significant control or influence (eg amount of energy used to create roads).

# Current Footprint

In 2020, the City of Unley footprint has been estimated as approximately 1,700 tonnes of Carbon Dioxide equivalent emissions per annum Scope 1 & 2 and 1,900 for Scope 3.

Emissions are dominated by electricity used in buildings and by street lighting, diesel in heavy vehicles and gas to heat the Unley Swimming Centre. For Scope 3, the estimated footprint of roads, kerbs, footpaths and stormwater pipes dominates. More information on this assessment and data can be found in the *Climate and Energy Technical Report 2021*.

SCOPE	TOTAL TONNES CO2-E	SUBCATEGORY	TONNES CO2-E
<b>Scope 1</b>	<b>526</b>	Gas	183
		Petrol	73
		Diesel	270
<b>Scope 2</b>	<b>1,193</b>	Streetlights, paths & parks	445
		DIT Lighting	276
		Buildings	472
<b>Scope 3</b>	<b>1,897</b>	Travel	4
		Electricity embodied in water	85
		Diesel use in waste collection	128
		Council Waste	180
		Roads, paths & stormwater	1,500

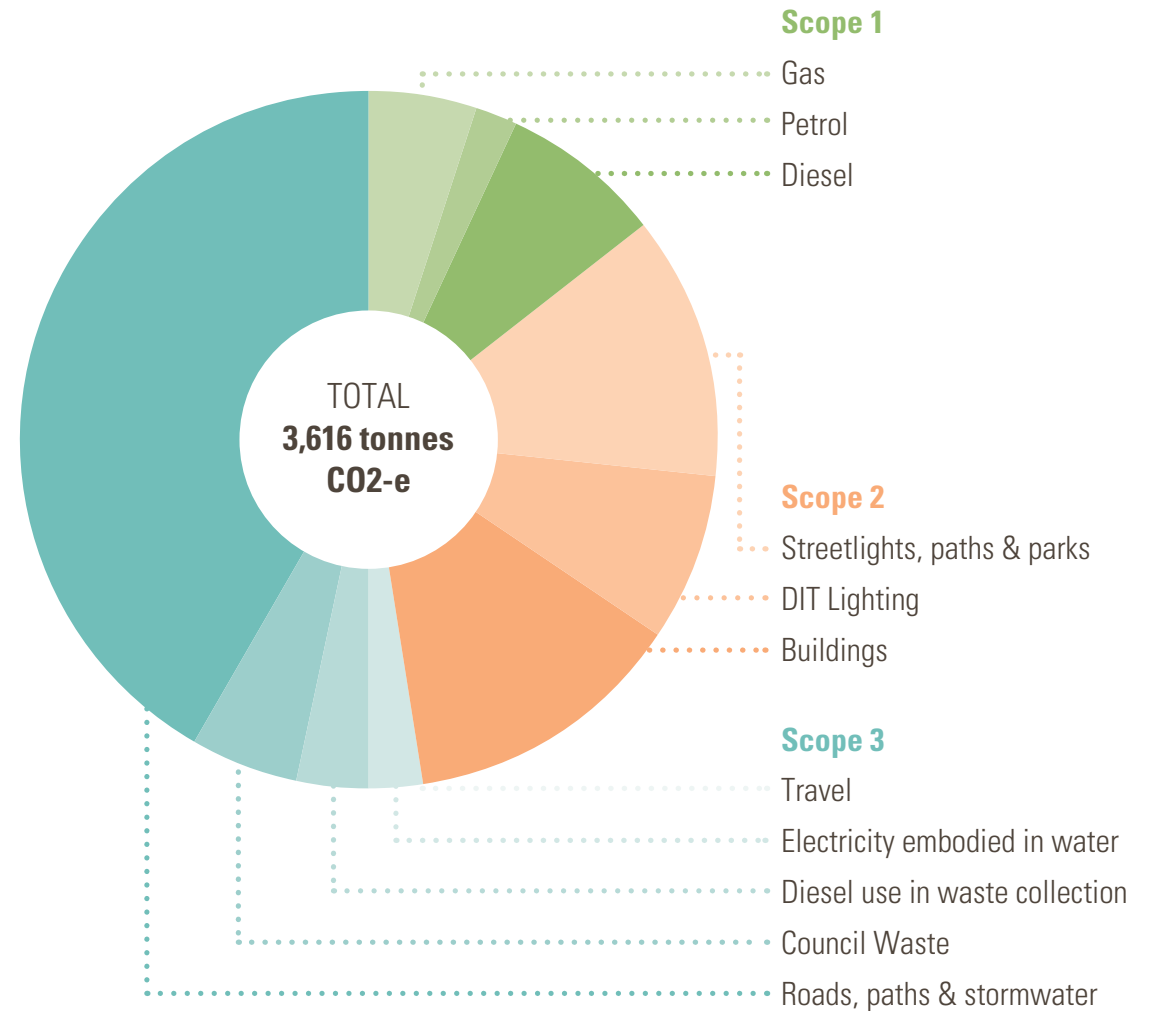


Figure 1: 2020 Estimate of Corporation of the City of Unley Emissions Scopes 1, 2 & 3

# Carbon reduction pathways

Figure 2 depicts how multiple actions will work together to reduce corporate emissions for scope 1 & 2 for fuels, gas and electricity sources.



## Transition to renewable electricity grid

Projected reductions as South Australian Government transitions to 100% renewable energy for electricity grid by 2030.



## Electric Vehicles

Electrification of the passenger and specialist vehicle fleet to electric vehicles (EV) as suitable models become available.



## Street Light Replacements

Continue rollout of LED efficient lighting.



## Solar PV

Continue install renewable energy on Council-owned buildings.



## Building Upgrades

Continue energy efficiency improvements as part of normal asset maintenance.



## Swimming Centre Upgrades

Replace gas heating boilers with low emission alternatives such as electric heat pumps.



## Remaining Emissions

Projected carbon footprint which Council has not reduced or made from renewable sources.

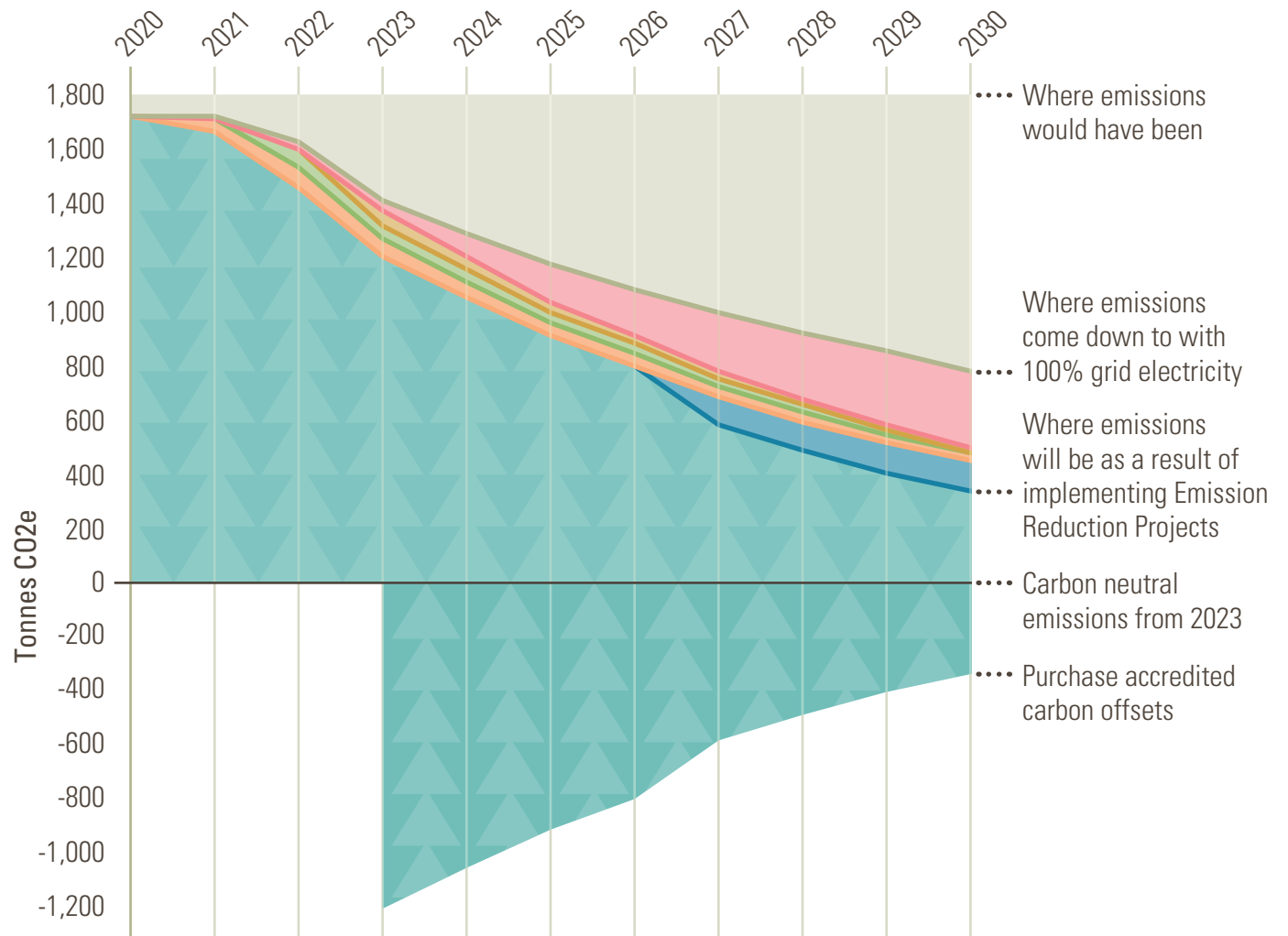






Figure 2: Effects of Emission Reduction Projects for Scope 1 & 2



Reducing Scope 3 emissions will be more difficult than Scope 1 and 2, where there are clear cost-effective alternatives in the market already.

However, there has been significant progress made in the development of lower-emission alternatives to concrete and asphalt which are amongst Council’s largest sources of Scope 3 emissions.

Figure 3 shows a forecast scenario of how multiple actions will work together to reduce corporate emissions for Scope 3 for travel, corporate waste, water, civil works and fuel used in waste collection. It must be noted that Scope 3 emissions is an area that the City of Unley had not historically been measuring so there are limitations in the current estimate. Monitoring and reporting on Scope 3 emissions will be improved moving forward.

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**Electricity embodied in water use**  
 Increased renewables at sites used to filter and pump potable water that Council uses.
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**Council operational waste reductions**  
 Reducing usage and increasing diversion to landfill waste from our buildings, depot and community centres.
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**Implement lower carbon roads, paths and stormwater works**  
 Forecast impact from increasing use of recycled content and low-carbon alternatives such as recycled crumb rubber in road reseals.
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**Waste Collection Reduction Diesel Use**  
 Anticipated impact as waste collection trucks are replaced.

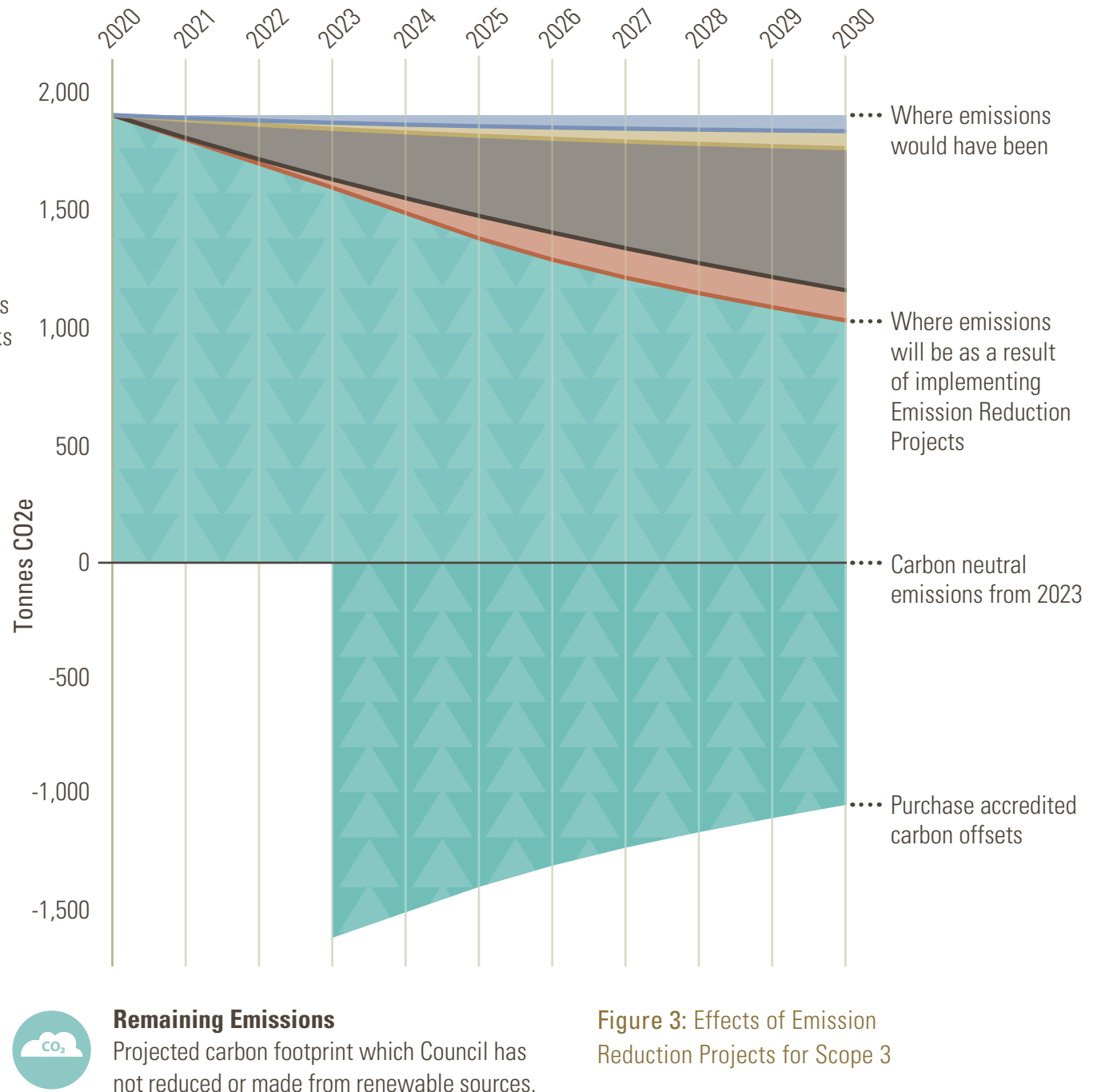


Figure 3: Effects of Emission Reduction Projects for Scope 3

# Summary Action Plan

ACTION	ADDITIONAL COST	EXISTING BUDGET	STAFF TIME
<b>YEAR 1–2: 2021/22 &amp; 2022/23</b>			
Commence Electric Vehicle transition as replacements are due and viable alternatives are available	✓	✓	
Continue LED / building efficiency upgrades		✓	
Establish a Climate / Circular Economy Council Policy			✓
Develop and implement sustainable procurement procedure and templates to support project management framework			✓
Advocate LGA for and consider 100% renewable electricity bulk contract in 2023	✓		✓
Develop design standards guideline for Council owned buildings/assets in year 2			✓
Develop the Climate Partner Fund to assist lessees to reduce emissions	✓		
Establish internal staff working group to guide delivery of plan and in particular identify Scope 3 emission reduction opportunities. Includes advocating/ partnering with other organisations towards shared challenges.			✓
Improve and expand carbon management system to track Scope 3 emissions	✓		
Develop and implement education and communication strategy, including an annual report on carbon footprint and projects undertaken			✓

ACTION	ADDITIONAL COST	EXISTING BUDGET	STAFF TIME
<b>YEARS 3–5: 2023/24, 2024/25 &amp; 2025/26</b>			
Commence annual purchase of accredited offsets from December 2023 to balance carbon footprint. Apply for Carbon Neutral status under Climate Active.	✔		✔
Review and report on progress to Global Covenant of Mayors for Climate and Energy (GCoM)			✔
Trial Scope 3 low carbon alternatives	✔		
Gradually replace light and heavy fleet with electric vehicles. This will be done as renewal is due AND suitable vehicles on market. Includes smaller, specialised items and other petrol-based devices.	✔	✔	
Install solar across Council buildings	✔		
Continue building efficiency upgrades and replacements low carbon options		✔	
Major review of the plan including consideration of accelerating later year actions			✔
<b>YEARS 6–9: 2026/27, 2027/28, 2028/29 &amp; 2029/30</b>			
Implement low-carbon alternatives	✔	✔	
Replace Gas Boilers at Unley Swimming Centre	✔	✔	
Complete electrification of fleet		✔	
Continue annual purchase of accredited offsets for remaining emissions for energy and utilities we cannot feasibly reduce or create from renewable sources per annum	✔		

# State Government Alignment

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The South Australian Government has set a carbon reduction target of Carbon Neutral by 2050. This is broadly in line with the Paris Agreement to limit global warming to less than 2 degrees Celsius. As an interim target, South Australia aims to achieve at least 50% net reduction in emissions from 2005 levels by 2030<sup>1</sup>, with 100% net renewable energy generation by 2030.

With the City of Unley aiming for Carbon Neutral by 2023, we are showing a leadership role in reducing carbon emissions ahead of the State Government targets. Neutralising these emissions by 2023 will require the purchase of offsets to be achieved without a material cost premium on investments in emissions reduction technologies.

1. Garnaut, R, South Australia's Climate Change Challenge and Opportunity, September 2020



# Community Emissions

While the actions to address climate change in community-wide emissions remain outside of Council's direct control, there are key areas where we have some influence. Most notably in the areas of transport and waste management.

A Community Emissions Profile for the City of Unley was received in May 2020 through collaboration with other South Australian Councils and consultants, Ironbark Sustainability, which is available online at [snapshotclimate.com.au](https://snapshotclimate.com.au).

It includes estimates for Scope 1, 2 & 3 emissions but has limitations especially for products that were made elsewhere and international travel. For example, how much red meat is consumed by residents and/or the number of flights per capita is currently impossible to assess at a local government scale.

In Figure 4 it is interesting to note that in 2018/19, 45% of community emissions were estimated from transport which highlights the important role Council continues to play in supporting the reduction of community emissions through active transport infrastructure. Council will:

- Continue to encourage and support residents to move food waste into organics bins for composting rather than landfill.
- Continue to invest in bikeways and pedestrian-friendly streetscapes.

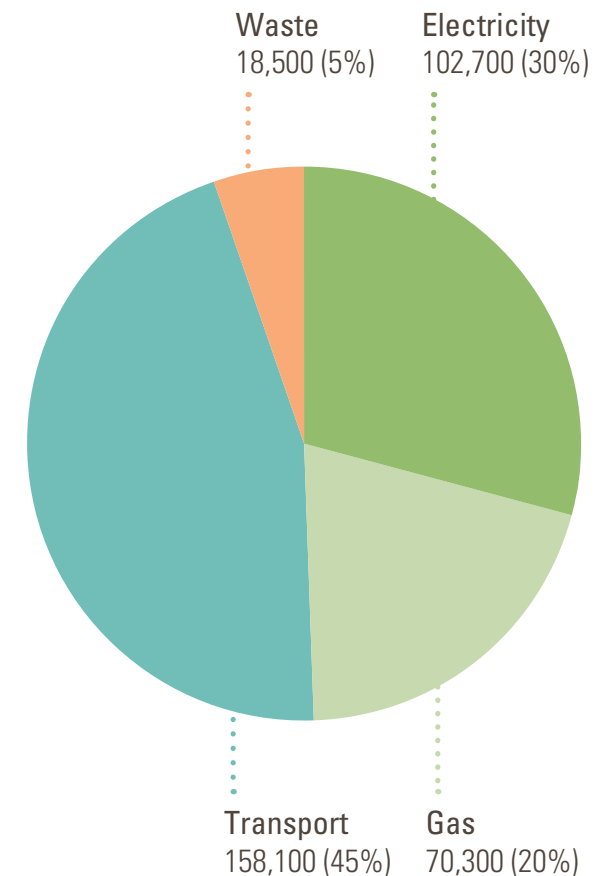


Figure 4: Unley 'Snapshot' 2018–19 data.  
Total estimate of 349,600 CO<sub>2</sub>-e

# Climate Partners Fund

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Council can play an important leadership role which engages the broader community in their carbon emissions reduction plan by facilitating emissions reduction projects amongst its tenants.

City of Unley leases many buildings to community groups and sporting clubs. While emissions from these buildings do not count towards Council's carbon footprint, an opportunity exists to extend the benefits of energy efficiency projects undertaken in Council-occupied buildings, to the broader community.

City of Unley is establishing a new Climate Partners Fund to offer incentives to not-for-profit tenants of Councils owned buildings to improve the energy efficiency of individual facilities.

There are also other supporting resources that are tailored to suit sport and recreational groups such as:

- **Sport & Recreation Sustainability Guide**  
[orsr.sa.gov.au](http://orsr.sa.gov.au)
- **Conservation Council SA Green Hubs**  
[conservationsa.org.au/green\\_hubs](http://conservationsa.org.au/green_hubs)
- **City of Unley Community Grant Funder**  
[unley.grantguru.com.au](http://unley.grantguru.com.au)

# Household Carbon Calculators

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There are many free calculators available to estimate personal and household carbon footprints.

While this plan is focused on Councils operational emissions, anyone can follow a similar process of assessing and then working to reducing carbon emissions impact.

For more information, please visit [unley.sa.gov.au/climate](http://unley.sa.gov.au/climate)



# Find out more at [unley.sa.gov.au/climate](http://unley.sa.gov.au/climate)

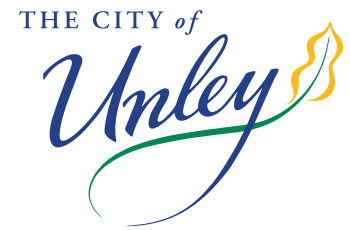
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This plan draws on the detail from *The Energy Project (2021) City of Unley Climate and Energy Technical Report*.

## DISCLAIMER

All information given in this document is believed to be factually correct and provided through our experience and local knowledge of the City of Unley conditions, given in good faith without prejudice. As information is subject to change, the City of Unley shall accept no responsibility for any loss or damage resulting from the use of, or reliance on, the contents of this document.





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