



# Net Zero Emissions Plan



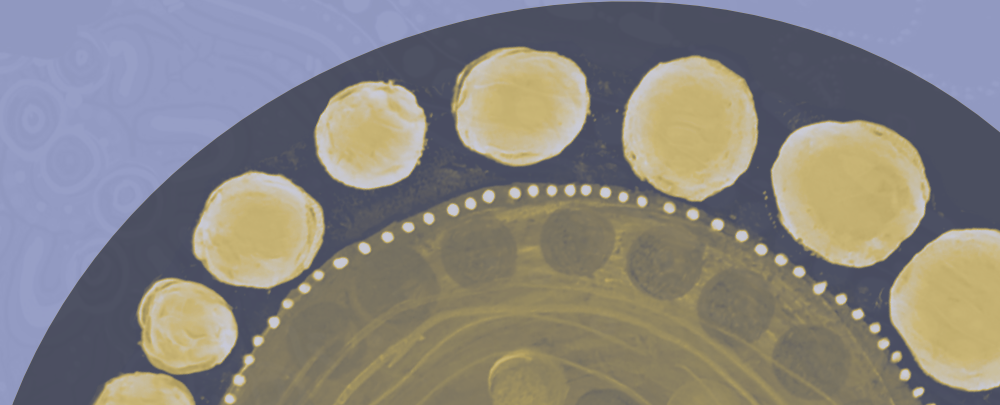


# *Kaurna Acknowledgment*



*We acknowledge and pay respect to the Traditional Owners of the land on which we stand, the Kaurna People of the Adelaide Plains. It is upon their ancestral lands that the Port Adelaide Enfield Council meets. It is also the Place of the Kardi, the Emu, whose story travels from the coast inland.*

*We pay respect to Elders past, present and emerging. We respect their spiritual beliefs and connections to land which are of continuing importance to the living Kaurna people of today. We further acknowledge the contributions and important role that Aboriginal and Torres Strait Islander people continue to play within our shared community.*





## Foreword from the Mayor & CEO

The Net Zero Emissions Plan demonstrates the commitment of the City of Port Adelaide Enfield to accelerate action to reduce the organisation's carbon footprint. The Plan details the emission reduction pathways and initiatives that we need to take as we strive to reduce our emissions by at least 30% by 2025 and at least 60% by 2030.

In 2019 the City of Port Adelaide Enfield declared a climate emergency and joined the national Climate Council's Cities Power Partnership in 2021. The Plan is part of these commitments. While our actions will help reduce greenhouse gas emissions, implementation of the Plan will also reduce costs and pollution and help stimulate a local low carbon economy.

We have already achieved a lot through installing solar photovoltaics on council buildings, switching our light fleet to electric vehicles and reducing commercial waste to landfill. However, there is still much to be done.

We believe that the City of Port Adelaide Enfield can truly become a climate-ready city by leading by example and learning from and working with others that are taking action. Together, we can continue to transform our city to make it sustainable for current and future generations.



Claire Boan | Mayor, City of PAE



Mark Withers | Chief Executive Officer, City of PAE



## Our Achievements

The Net Zero Emissions Plan is key in delivering on the City Plan 2030's vision for a **low carbon, water sensitive and climate resilient city** and for demonstrating that the City of Port Adelaide Enfield is an **innovative, collaborative and high performing leader within local government.**

Since 2008 Council has implemented several initiatives that reduced its corporate greenhouse gas emissions by approximately 43% by 2019 including:

- Installation of 814kw of solar photovoltaic across 40 council buildings
- Installation of 85kw of battery storage
- Implementing energy efficiency and air conditioning upgrades
- Energy audits of high energy use sites
- A 10% reduction in consumption across electricity and natural gas and a 14% reduction in fuel has been achieved since 2008
- Purchase of fuel-efficient vehicles, hybrid vehicles and plug-in hybrid vehicles (PHEVs).



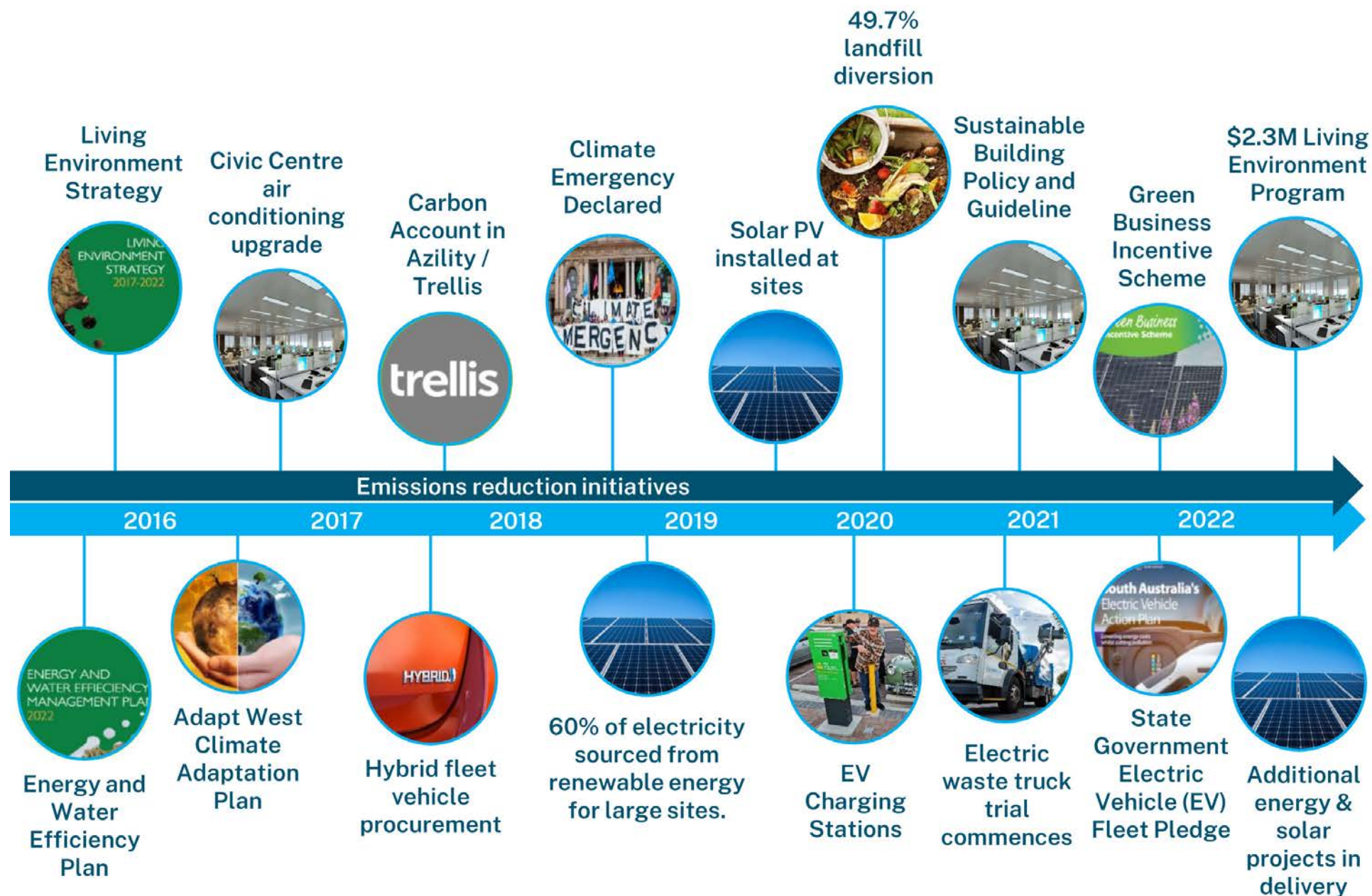


Figure 1 Existing initiatives

# Our greenhouse gas emissions profile and baseline projection

Before a greenhouse gas emissions reduction target can be set, it is important to develop a baseline emissions profile and to set a baseline year for the target. This Plan has been developed using the carbon management hierarchy, with the aim to reduce emissions as far as possible prior to considering the purchase of carbon offsets.

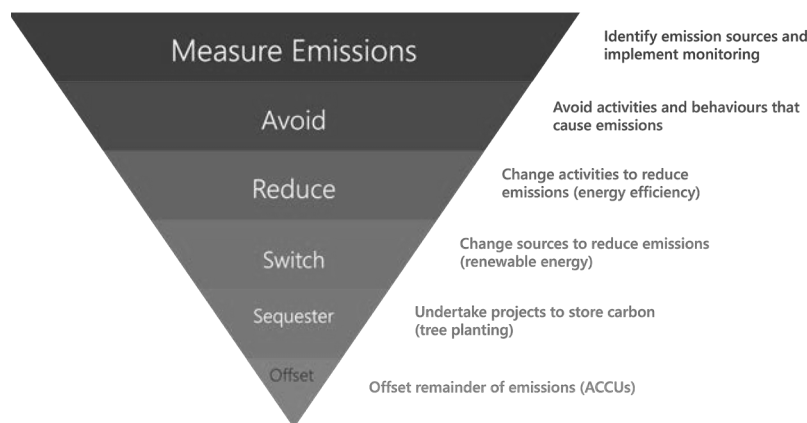


Figure 2 Carbon Management Hierarchy

To ensure that carbon neutral certification can be achieved in the future, this Plan has also been developed in line with the following standards and guidelines:

- Climate Active Carbon Neutral Standards
- Science Based targets to ensure that the Plan's target will work to towards limiting global warming to a 1.5°C or well-below 2°C temperature increase

The copy of the detailed technical report that has informed the preparation of this Plan can be downloaded from the PAE website [here](#).

The baseline corporate greenhouse gas emissions profile for the City of Port Adelaide Enfield has been calculated as 6,734 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>-e) in 2020/21. The baseline greenhouse gas emissions profile includes Scope 1, 2 and 3. The breakdown of the corporate greenhouse gas emissions profile and sources of Scope 1, 2 and 3 are outlined in the diagrams below.

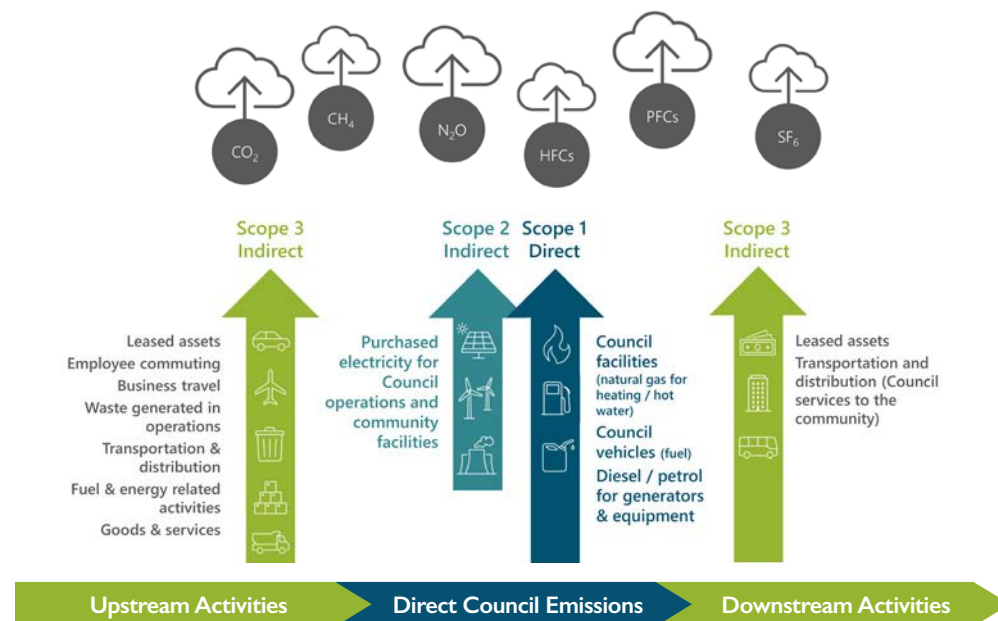
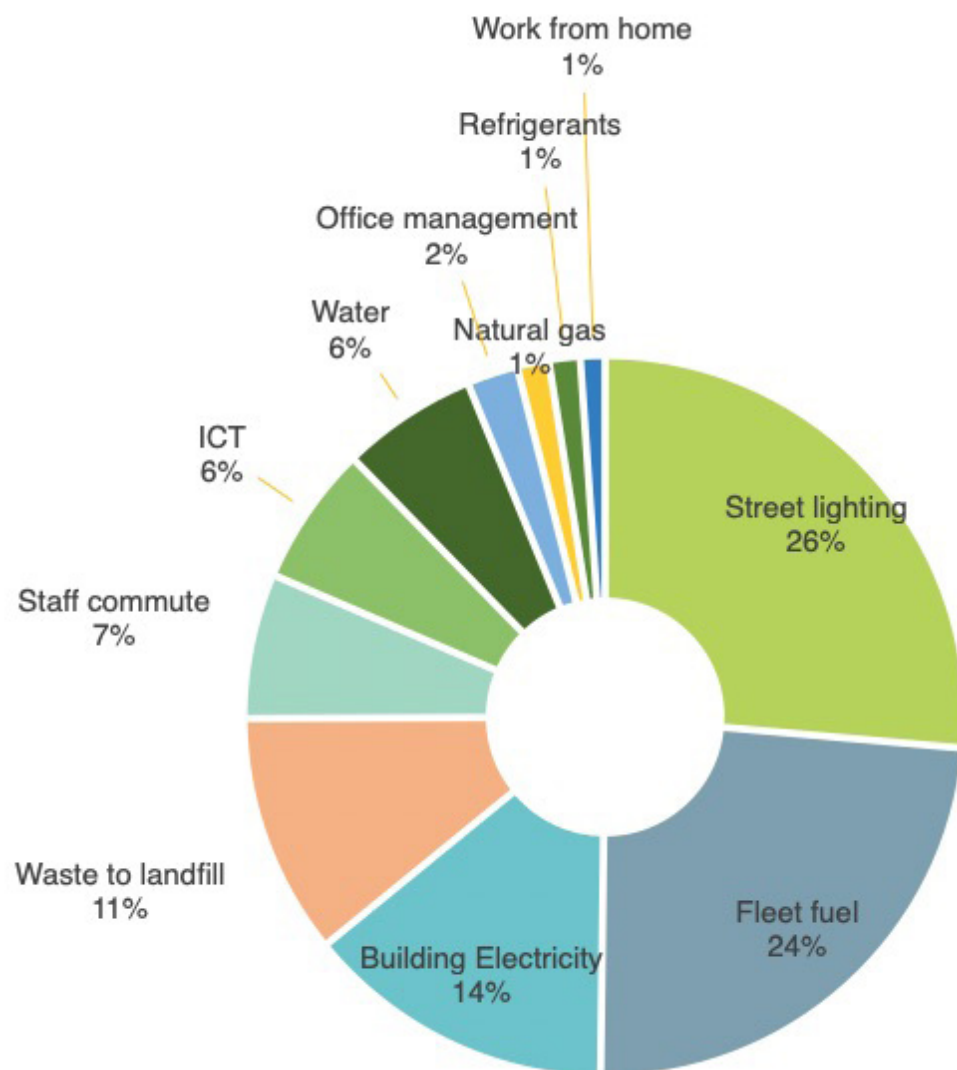


Figure 3 Scope 1, 2 & 3 greenhouse gas emissions sources

Scope 1	tCO <sub>2</sub> -e	Scope 3	tCO <sub>2</sub> -e	tCO <sub>2</sub> -e	
Fleet Fuel	1,550	Streetlights	1,232	Consumables	95
Natural Gas	93	Buildings	189	Telecommunications	74
Refrigerants	91	Waste to Landfill	704	Work From Home	72
Scope 2	tCO <sub>2</sub> -e	Staff Commute	424	Catering	45
Streetlights	549	Water	374	Cleaning	9
Buildings	893	IT Equipment	333	Business Travel	8

Table 1 The Council's 2020/21 greenhouse gas emissions profile (in tCO<sub>2</sub>-e)



The top 5 emission sources for the Council's operations are electricity for streetlights, fleet fuel, building electricity, waste to landfill and staff commute which equate to over 80% of total greenhouse gas emissions and are therefore a focus of this Plan. However, as emission reduction projects are implemented, the remaining emission sources become a higher priority as their share increases.

Before setting the target the baseline greenhouse gas emissions pathway was modeled through to 2030 and takes into account the following assumptions:

- Increasing renewable energy generation in South Australia, with projections based on data from the Australian Long-Term Emissions Reduction Plan and SA Government predictions (58%-97% renewable energy generation by 2025).
- Increasing electric vehicle (EV) uptake based on average market uptake and projections from the AEMO reports for EV uptake.
- Minor improvements in energy and water efficiency as a result of asset replacement programs, improving appliance standards and minor reductions in waste to landfill.

**Projections have demonstrated that due to the increase of renewable energy in the South Australia grid and the flow on effects for other industries and emission sources, Council's corporate greenhouse gas emissions will reduce from 6,734 tCO<sub>2</sub>-e in 2020/21 to approximately 2,657 tCO<sub>2</sub>-e in 2030/31.**

Figure 4 The Council's 2020/21 greenhouse gas emissions profile

# Our targets and greenhouse gas emission reduction pathways

A net zero greenhouse gas emission pathway has been developed through to 2030 to clearly outline the Council's emission reduction goals and key project timeframes for implementation. The Council aims to reduce its corporate greenhouse gas emissions by at least 30% by 2025 and at least 60% by 2030 compared to the 2020/21 baseline.

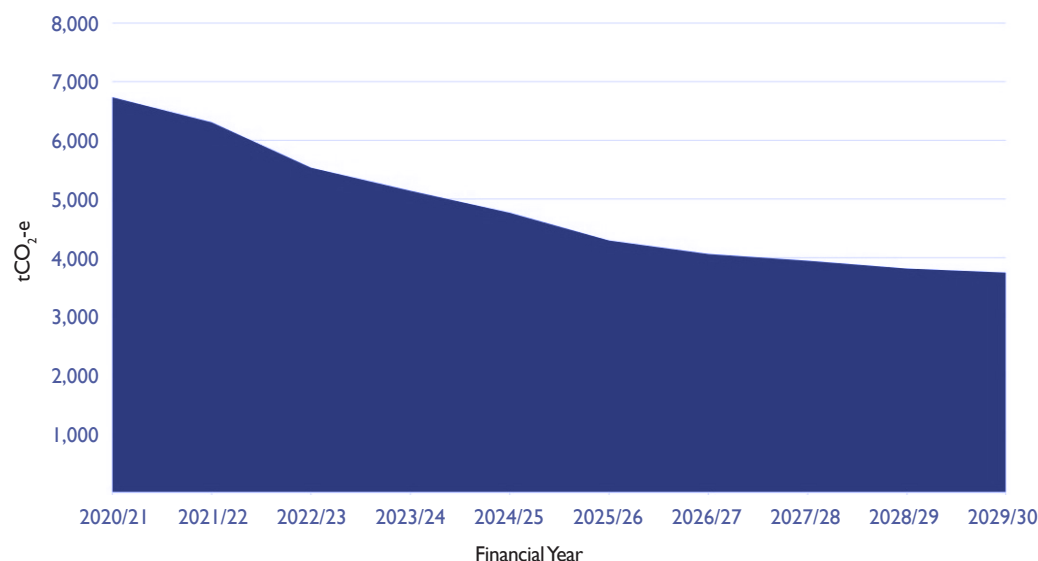


Figure 5 Baseline greenhouse gas emissions reduction pathway

Key initiatives in the greenhouse gas emission reduction pathway include:

- **Renewables & Energy Efficiency** Solar PV , energy efficiency & purchase of 100% renewable energy electricity by 2023
- **Fleet Transition** Transition Council's light fleet to electric by 2027 & medium to heavy fleet to electric or hydrogen by 2030
- **Waste Reduction** Reduce commercial waste to landfill
- **Water Efficiency** Reduce potable water for open space irrigation and buildings
- **Office Procurement** switch to low emission office & IT equipment & supplies and offset flights
- **Refrigerants and Gas** Transition to low emission refrigerant gases and 100% electric buildings.

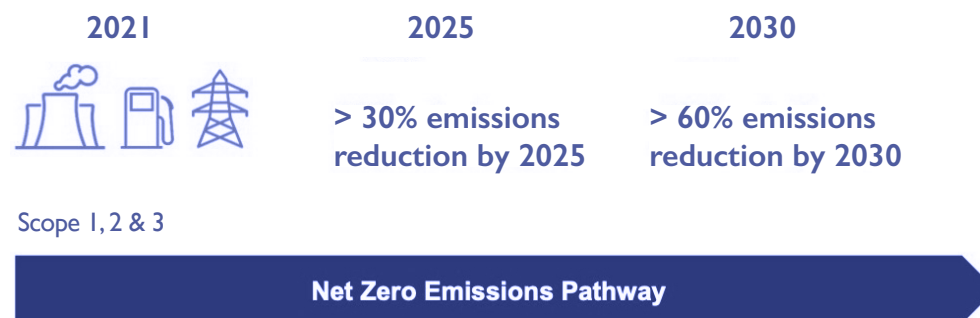


Figure 6 Greenhouse emission reduction targets



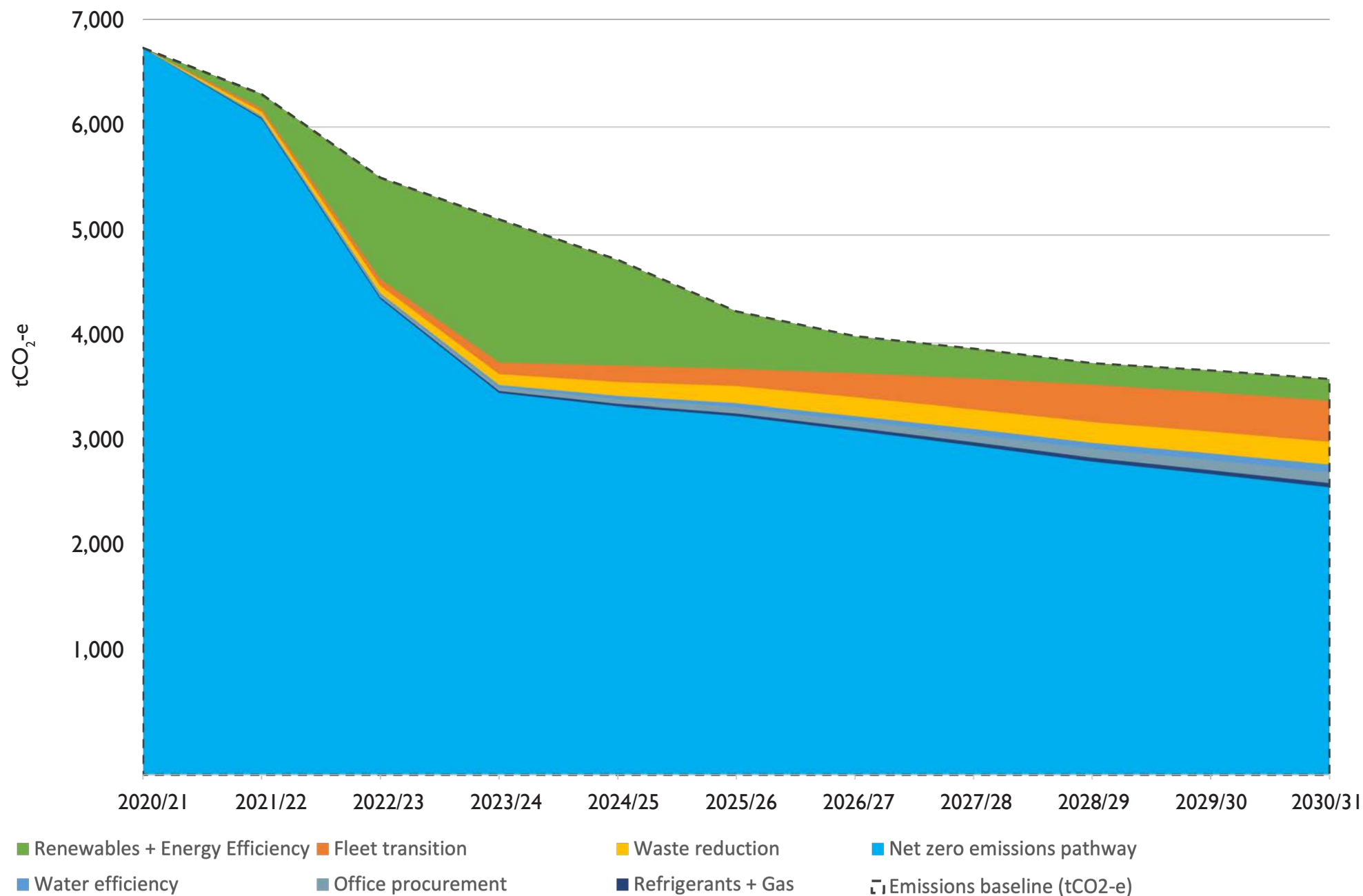


Figure 7 Cumulative greenhouse gas emission reduction outcomes

# Greenhouse Gas Emission Reduction Initiatives & Offsets

The following summarises the emission reduction initiatives identified for implementation from the 2020/21 baseline year.



## Net Zero Building

- Green Star Buildings certification for major capital works
- Aboriginal Cultural Centre first flagship Green Star project



## Energy Efficiency

- 10%-15% reduction in energy consumption by 2025



## Natural Gas Transition

- Natural gas to electric for new builds / asset replacements
- 40% reduction in natural gas emissions by 2030



## Zero Emission Transport

- Light passenger and medium vehicles transition to hybrid & electric vehicles. Heavy vehicle plan developed in 2-3 years
- Petrol and diesel powered equipment transition to electric options
- Active and sustainable commute supported including walking/cycling (end of trip facilities + e-bikes), public transport and car pooling



## Business Travel

- Flights 100% offset at booking + reduced travel maintained
- Virtual meetings / conferencing to reduce business travel



## Waste to Landfill

- Waste audits at corporate sites to improve data and diversion rates
- 60% corporate landfill waste diversion by 2025, >90% by 2030



## Water Efficiency

- Open Space Service Review implemented + water efficiency measures including smart meters and replacing taps, toilets, showers
- 10-15% reduction in water emissions by 2030



## Refrigerants

- Low Global Warming Potential (GWP) refrigerants used on new builds and as part of asset replacement programs



## Supply Chain

- Local and Carbon Neutral suppliers for office procurement
- 10% embodied emissions reduction for new capital works projects
- Embodied emissions assessment for infrastructure works



## Supportive Initiatives

- Communication and Promotion
- Carbon Neutral Certification & Events
- Procurement Policy Review
- Sustainable Behaviour Program (Internal)
- Virtual Power Plant Investigation (Pilot)

To meet the 2025 emission reduction target, Council will need to invest an additional \$2.23 million of capital funds and \$400,000 of operational funds (once off) over the next 5 years. The initiatives combined are estimated to save Council approximately \$500,000 over the next five years through a reduction of operating costs (gas, water, fuel and electricity), generating a simple return on investment of around 5 years. Further investment post 2027 will be subject to feasibility as newer emission reduction technologies emerge and markets mature (e.g. heavy fleet vehicles, circular economy innovations, low emission materials and a localised blue carbon offset opportunity).

### The future purchase of certified carbon offsets will be required to achieve carbon neutrality:

- In 2025 a review will be undertaken on the cost to procure certified carbon offsets, in particular localised offset opportunities in blue carbon (e.g. biosequestration through restoration of mangrove systems, biodiversity plantings) and the local circular economy (e.g. mitigating emissions in the local waste sector).
- By 2030 net zero emissions could be achieved via certified carbon offsets to deal with unavoidable remaining emissions.

Under the Climate Active standards, Australian Carbon Credit Unit's (ACCUs) have been mandated as part of organisational certifications. As a result the Council would need to purchase ACCUs if certification is pursued. The cost of offset unit purchase is variable and market dependent as shown in Figure 8).

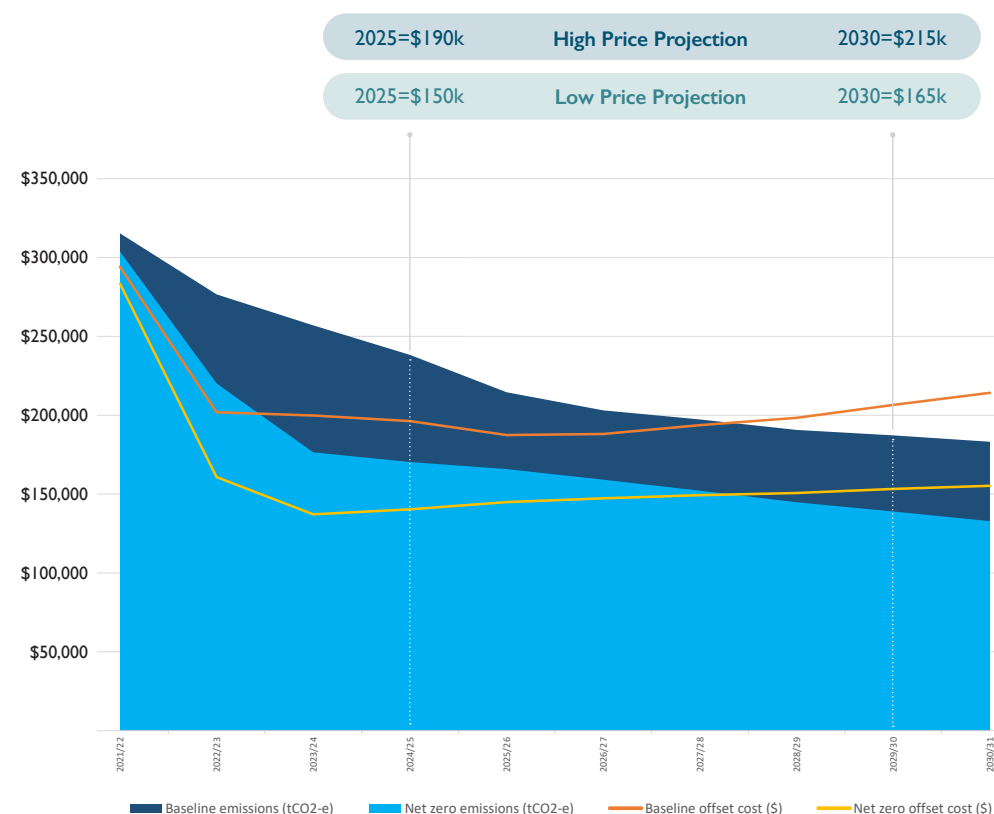


Figure 8 Carbon Offsets Price Projections for City of Port Adelaide Enfield Corporate Greenhouse Gas Emissions

## Tracking Progress

Given the evolving international, national and state policy settings regarding climate change and dynamic nature of the energy and electricity market, the corporate baseline and implementation of the Plan will be under constant review.

An annual review of the corporate greenhouse gas baseline and subsequent annual inventory will be required to maintain meaningful public reporting and monitoring of greenhouse gas reduction achievements. A user friendly dashboard will also be developed to ensure changes in the emissions profile and progress with the Plan's implementation can be regularly monitored by Council and the community.





CITY OF  
Port Adelaide Enfield