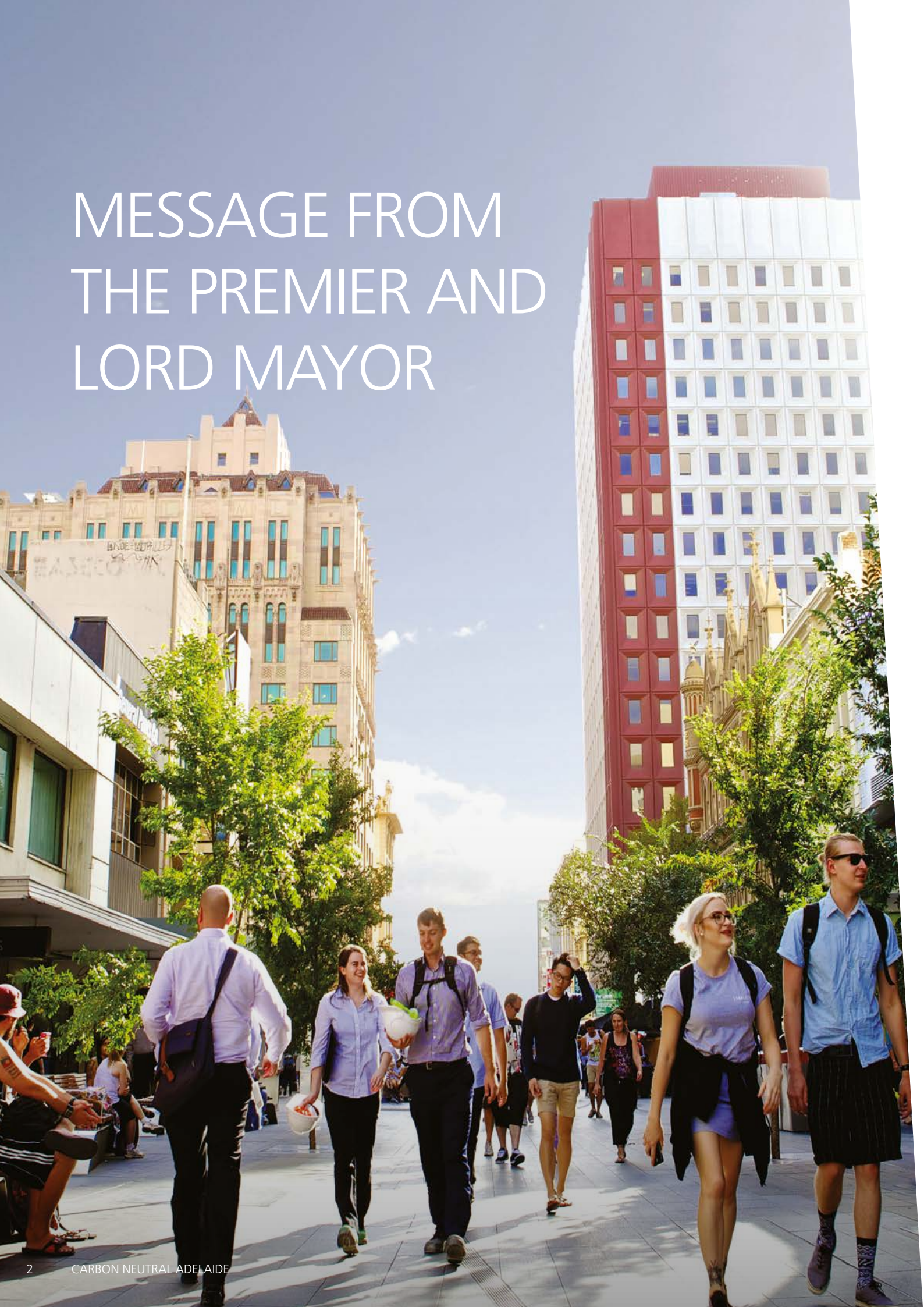


CARBON NEUTRAL ADELAIDE

A shared vision for the world's first
carbon neutral city



MESSAGE FROM THE PREMIER AND LORD MAYOR



Adelaide is poised to become the world's first carbon neutral city, and this joint vision statement outlines what it will look like and how we intend to make it a reality.

By working together constructively, the Government of South Australia and the Adelaide City Council will build on their many achievements so far and make our capital a global climate change exemplar.

Ours will be an urban environment characterised by innovation, prosperity, dynamism, new-economy jobs and industries, and the widespread use of clean and green renewable energy.

We come to this task with a strong record of partnership and a series of impressive milestones.

In April 2015, we became the first place in Australia – and one of the first in the world – where a State Government and capital-city council signed parallel international agreements on climate change and emissions.

In 2007, the State Government led Australia in legislating greenhouse gas reduction and renewable energy targets and in 2015, Adelaide City Council introduced Australia's first consumer incentive for the installation of battery energy storage systems paired with solar photovoltaics.

Between 1990 and 2013, South Australia's carbon emissions fell by 9% while its economy grew by more than 60%.

Adelaide's emissions reduced by 20% from 2007 to 2013 – a period in which its population grew by 27%, office floor area increased by 16% and economy grew by 28%.

In the space of just 11 years, South Australia has increased renewable electricity generation from almost zero to 41% – a sign not just of remarkable progress, but of enormous potential.

This document outlines our shared vision and our framework for action by which we intend to make Adelaide carbon neutral – including investment in energy-efficient technologies and renewables, the use of low-emission forms of public transport, a preference for electric and hybrid cars in the CBD, improved waste management, and the encouragement of cycling and walking.

As part of our economic transformation Adelaide has an opportunity to both improve the lives of its citizens and show international leadership by becoming the world's first carbon neutral city.

We, together, invite you to join us in this great and historic endeavour.



Jay Weatherill

Jay Weatherill
Premier of
South Australia



Martin Haese

Martin Haese
Lord Mayor,
City of Adelaide

OUR SHARED VISION



In delivering the Carbon Neutral Adelaide Partnership the Government of South Australia and Adelaide City Council will realise the following vision for our city.

OUR SHARED VISION

The City of Adelaide will be the world's first carbon neutral city. Adelaide will build its reputation as a clean, green, and prosperous city. Our community will capitalise on the significant economic and environmental benefits of a swift and well-planned transition to a low carbon economy.

Employment in green innovation and sustainable businesses will grow as Adelaide is embraced as a real-world proving ground for next-generation technology and transport for the future, attracting investment and building influence.

High performance buildings with green walls and roofs will be powered by renewable electricity and support efficient use of resources, attracting residents to live and work in the city.

The Carbon Neutral Adelaide Partnership will enable Adelaide to grow into a vigorous city boasting a comprehensive network of cycleways and lively public spaces. More people will live and work in the city, without compromising its grace, space and charm.

Active modes of transport such as walking and cycling, combined with a low-emission public transport system, will reduce private car usage. Electric and hybrid vehicles will be preferred in the city.

Adelaide will be internationally recognised as a city that demonstrates a progressive urban centre can cast off the chains of last century's carbon-intensive economy and reap the rewards of prosperity, liveability and desirability for future generations.

WHY THE WORLD'S FIRST CARBON NEUTRAL CITY?

Becoming the world's first carbon neutral city provides a platform to attract investment to the city and the state and create opportunities for local business. By leading the way we will demonstrate our capability, enhance new-economy jobs and industries, export our clean products and services to the world and enrich the liveability of our city.

Our shared vision for the city is a substantial task that will require changes to be made to metropolitan Adelaide's transport and waste management systems and the state's energy supply.

Our goal of carbon neutrality signals a clear direction to businesses and residents of South Australia and establishes a commitment to playing our part in limiting climate change to below two degrees of global temperature increase.

South Australia faces an ever-present climatic challenge with droughts, floods and fires that have made us resilient and resourceful. We're well versed in adapting to our environment, and becoming the world's first carbon neutral city will enhance our adaptation ability.

The City of Adelaide
will be the world's first
carbon neutral city.

CARBON NEUTRAL ADELAIDE PARTNERSHIP

Adelaide,
the capital city of
South Australia, has
regularly been ranked
as one of the world's
most liveable cities.



The Economist Intelligence Unit Global Liveability Ranking

The Adelaide City Council and the Government of South Australia have established a globally unique partnership between a city and a state. We are working together to achieve carbon neutrality whilst driving economic opportunities and job creation.

OUR PARTNERSHIP

Adelaide and South Australia has a long history of progressive leadership and a reputation for punching above our weight, and our approach to climate change is no different.

We have signed parallel international agreements on climate change – the Compact of Mayors and the Compact of States and Regions – and have formally endorsed our mutual aspiration to establish Adelaide as the world's first carbon neutral city via a Sector Agreement under South Australia's climate change legislation. We believe this to be a globally unique partnership which will be an exemplar for other cities and regions.

Additionally, the Government of South Australia has released a new *Climate Change Strategy 2015–2050*. In parallel, the Adelaide City Council has released a *Carbon Neutral Strategy 2015–2025*.

OUR CITY

Adelaide is the capital city of South Australia and greater metropolitan Adelaide is home to 75% of the state's population of 1.7 million people. The City of Adelaide is comprised of the Adelaide CBD, North Adelaide and surrounded by 930 hectares of the Adelaide Park Lands. As the commercial heart of our state the city accounts for 20% of the state's economy.

With a rapidly growing workforce and residential population, the City of Adelaide receives 262,000 daily visitors and is the hub of greater metropolitan Adelaide's public transport system.

The Carbon Neutral Adelaide Partnership will make the entire Adelaide City Council municipal area – including the Adelaide Park Lands, CBD and North Adelaide – carbon neutral.



DECOUPLING ECONOMIC GROWTH AND CARBON EMISSIONS



Since 1990, South Australian
carbon emissions
have reduced by **9%**

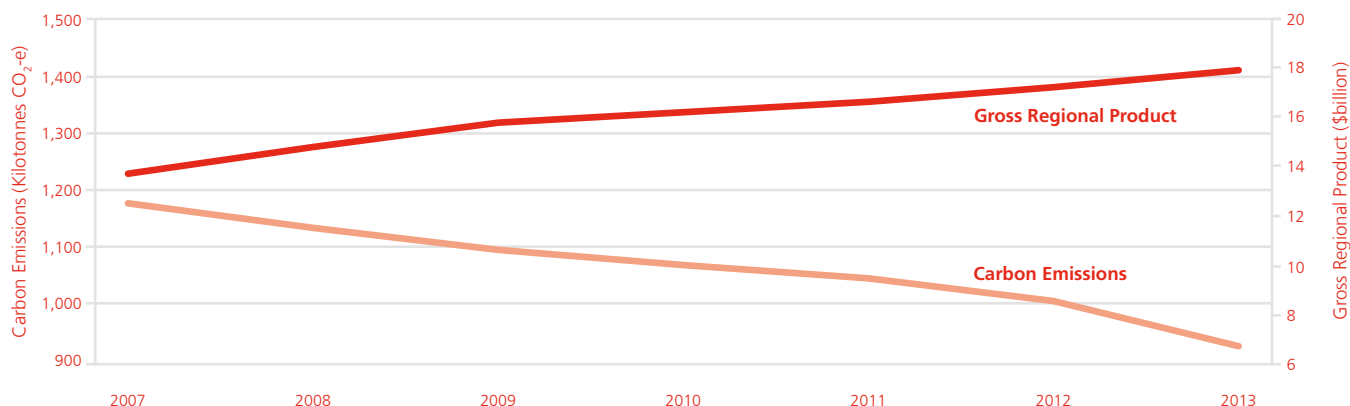
while the state's economy
has grown by over

60%



South Australian leadership has driven down carbon emissions while simultaneously growing our economy. We have successfully decoupled carbon emissions and economic growth for both our city and our state.

CITY OF ADELAIDE 2007 TO 2013 CARBON EMISSIONS AND GROSS REGIONAL PRODUCT



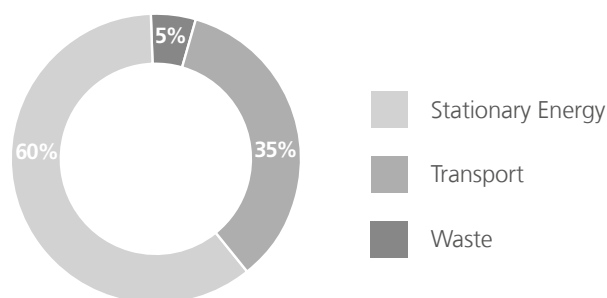
Between 2007, the year South Australia established its climate change legislation and released its first climate change strategy, and 2013 Adelaide's emissions have reduced by 20%.

Over the same period the city's economy grew by 28%, the city's population grew by 27% to 22,196 and commercial office floor area increased by more than 243,000m² or 16%.

Much of this success results from making our state an investment friendly destination for renewable energy and our city for high performing green buildings.

CITY OF ADELAIDE EMISSIONS PROFILE

In 2013, total emissions of the city were 939,532 tonnes. Stationary energy and transport were the primary sources of carbon emissions, contributing 60% and 35% respectively. Waste that was disposed of to landfill generated 5% of city emissions.



20% Reduction in city carbon emissions from 2007 to 2013



Over the same period the City of Adelaide's Gross Regional Product increased by **28%**





OUR ACHIEVEMENTS SO FAR

TRANSPORT – DRIVING GREATER EFFICIENCY

- \$2.6 billion has been invested since 2007 to extend the light rail (tram) network through the city and upgrade and electrify the Adelaide Metro rail system
- The entire Adelaide metropolitan bus fleet is powered by lower emission alternative fuels including gas and bio-diesel
- The world's first solar electric bus, Tindo, was introduced to service in 2008
- Adelaide City Council established Australia's first free community bicycle share scheme
- Cycling journeys in and throughout the city have doubled since 2003

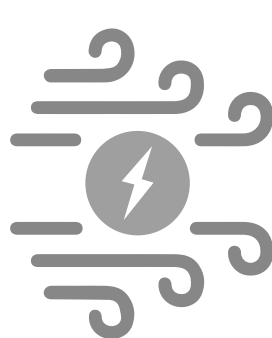
Cycling journeys in and throughout the city have

**doubled
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SOUTH AUSTRALIA – A GLOBAL LEADER IN RENEWABLE ENERGY

- Electricity generated in South Australia from renewable sources has increased from 1% in 2004 to 41% in 2015
- South Australia has 35% of Australia's installed wind capacity
- One in four South Australian homes has solar PV
- \$6.6 billion invested in wind and solar PV across South Australia since 2003
- In 2014 the state set a new renewable energy generation target of 50% by 2025
- We have established an investment target of \$10 billion in low-carbon energy generation by 2025
- The carbon intensity of South Australia's electricity supply has reduced by over 30% in less than a decade



41%

of electricity generated
in South Australia
in 2015 was from
renewable sources



ADELAIDE – ENERGY EFFICIENCY IN THE BUILT ENVIRONMENT

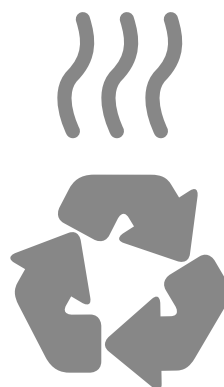
- Adelaide City Council has reduced its operational energy use by 15% since 2010
- Since 2001 the South Australian Government has improved the energy efficiency of its owned and leased buildings by 24%
- From 2007 to 2013 city office floor area grew by 243,000m² or 16%, yet through best practice green building design, energy efficiency and renewable electricity, emissions declined by 23%
- The CitySwitch Green Office Program, a partnership between the Cities of Adelaide, Sydney, Melbourne and Perth, includes 3,000,000m² of office floor space nationally

WASTE – WE'RE GETTING IT SORTED

- South Australia continues to lead the nation in both resource recovery and waste diversion
- South Australia's landfill diversion rate is Australia's highest at 77%
- Resource recovery is also Australia's highest at 2070 kg per person per year
- Enhanced Council recycling services and the *Better Practice Guide - Waste Management for Residential and Mixed Use Developments* are supporting higher recycling rates in city developments



23%
reduction in office
emissions since 2007



South Australia's
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OUR FRAMEWORK FOR ACTION

Our framework for action for establishing the City of Adelaide as the world's first carbon neutral city will focus on the following areas.

BUILD PARTNERSHIPS AND ENCOURAGE COMMUNITY ACTION



Build upon our joint aspiration and partner broadly to achieve our aim of a carbon neutral Adelaide.

We will:

- **Reward** and recognise commitment of businesses and individuals through a new partnership framework
- **Lead** by example and ensure that activities to support a low carbon future are accelerated for South Australian Government and Adelaide City Council operations
- **Run** the Carbon Neutral Adelaide Challenge to design and create innovative solutions to establish the City of Adelaide as the world's first carbon neutral city
- **Create** and foster opportunities for partnerships and businesses to grow and prosper from the low carbon economy
- **Share** information and raise awareness to enable action by business and the community
- **Support** low carbon research through the Cooperative Research Centre for Low Carbon Living.

INVESTMENT IN ENERGY EFFICIENCY AND RENEWABLES IN THE CITY



Drive public and private investment in energy efficiency of city buildings and public lighting and small scale renewables within the city.

We will:

- **Legislate** to enable private sector finance for commercial building upgrades
- **Improve** the energy performance of government and council owned buildings
- **Use** government leasing policies to continue to drive the market for high performing office buildings
- **Incentivise** business and household investment in solar PV, battery storage, energy efficient products and electric vehicle recharging points
- **Empower** vulnerable members of our community to enjoy the benefits of solar PV
- **Lead** by example. South Australia's Department of Environment, Water and Natural Resources will move into a newly refurbished office building and is working to achieve a world leading 6-Star Green Star fit-out rating*. This will be one of the first buildings to achieve this in the Adelaide CBD under the new Green Star rating system.

* www.gbca.org.au/green-star/



TRANSFORM THE WAY WE TRAVEL



Change the way we travel to and in the city.

We will:

- **Transform** to a low emission public transport system including train, tram and bus
- **Invest** in, and encourage, cycling and walking
- **Green** the city's streetscapes to improve liveability, attract residents and reduce private vehicle use
- **Reduce** the carbon footprint of our vehicle fleet
- **Guide** CBD and Greater Adelaide development around rapid public transport services
- **Accelerate** the uptake of electric and hybrid vehicles.

REDUCE EMISSIONS FROM WASTE



Build on South Australia's successes in waste reduction.

We will:

- **Encourage** building owners and developers to incorporate waste management systems that maximise recycling
- **Provide** new recycling services including food waste recycling for apartment buildings
- **Support** residents and businesses to waste less and recycle more
- **Improve** the amount and range of materials that are recycled and the use of low carbon materials in the built environment

INVESTMENT IN LARGE SCALE RENEWABLES ACROSS THE STATE



Continue to drive investment in large scale renewables to further reduce the emissions intensity of our electricity supply.

We will:

- **Attract** \$10 billion investment in low carbon energy generation
- **Undertake** a Low Carbon Energy direct purchase expression of interest for State Government operations.

OFFSET CARBON EMISSIONS



Carbon offsets are likely to be necessary to achieve carbon neutrality in Adelaide in the near term. Actions that achieve substantive and lasting reductions in emissions from the city will be prioritised to ensure the use of offsets decreases over time.

We will:

- **Identify** offset opportunities to reduce emissions and deliver economic return.

Carbon offsets defined: A carbon offset is a reduction in emissions of carbon dioxide or other greenhouse gases in order to compensate for an emission made elsewhere. For example, an individual might purchase carbon offsets to compensate for the greenhouse gas emissions caused by personal air travel. A carbon offset could be a project that reduces emissions such as energy efficiency or renewable energy, or it could be the avoidance of greenhouse gas emissions such as the destruction of industrial pollutants or agricultural by-products, destruction of landfill methane, and the protection or creation of carbon sinks like forestry projects.

WHERE TO FROM HERE



Our approach will centre on collaborative partnerships with business, institutions and the community built around a powerful union between a city and a state committed to action. In 2016 we will broaden our partnership to involve our city users, residents and businesses and develop an action plan to realise our shared vision.

PARTNERING TO IDENTIFY THE RIGHT TECHNOLOGIES

The Carbon Neutral Adelaide Partnership is working with global technology giant Siemens to assess the environmental and economic impacts of over 70 building, transport and energy technologies for the city using Siemens' City Performance Tool. The tool can assist in modelling technology uptake and the associated greenhouse gas emission reduction and air quality impacts, as well as the creation of local jobs to install, operate and maintain technologies.

The tool will inform the development of the Carbon Neutral Adelaide Action Plan to be released in mid-2016, allowing city planners to prioritise infrastructure investments based on measurable benefits for growth and sustainability.



PARTNERING TO PILOT SMART CITY TECHNOLOGIES

Global technology company Cisco has partnered with the Government of South Australia and the Adelaide City Council to pilot smart city technologies and establish the Adelaide Smart City Studio as part of its global Lighthouse City program. Two pilot projects have already commenced – one to replace existing street lights with sensor-driven LED lights to demonstrate power saving and smart control capabilities, and another to deploy cameras that remotely monitor the use of on-street carparks. Other projects will address environmental monitoring and people movement. The Smart City Studio will identify opportunities for further projects and help businesses, entrepreneurs and industry transform smart city inspiration into successful products and services.



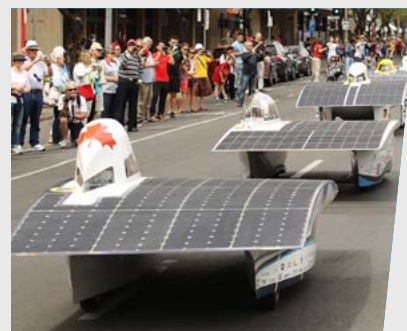
CARBON NEUTRAL ADELAIDE CHALLENGE

The Carbon Neutral Adelaide Challenge will invite people from South Australia and across the world to design and create innovative solutions to establish the City of Adelaide as the world's first carbon neutral city. The Challenge encourages partnerships between South Australians and international communities including businesses and entrepreneurs. The Challenge will spark new ideas for smart enterprise in a low carbon economy through the use of open data, innovative design, policy ideation and community action. By engaging industry, the private sector and the community in activities that help achieve carbon neutrality, the Challenge will make a significant contribution to a low carbon future for Adelaide.



NEARLY 30 YEARS OF ELECTRIC VEHICLE INNOVATION

The South Australian Government is the proud owner of the World Solar Challenge - the world's premier challenge to design and build a solar powered electric vehicle and drive it across the Australian continent from Darwin to Adelaide. Since the Challenge commenced in 1987 the event has contributed to global innovations in electric vehicle technologies including electric drivetrains, energy storage and energy management, as well as advanced and lightweight materials, aerodynamics, tyres, braking systems and of course solar photovoltaics. Attracting over 40 teams from 25 countries it provides the adventure of a lifetime for the thousands that have embraced the opportunity to participate.





For further information contact:

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www.adelaidecitycouncil.com/sustainability



Government
of South Australia

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