

Response to Climate Change at the City of Melville

The City of Melville recognises the global reach, broad scope and dramatic impact of climate change, and has identified this megatrend as being one of significance for the City at a local level.

Climate change encompasses:

- Adaptation to climate change
- Resilience to extreme weather crisis
- Resilience to water crisis
- Managing and mitigating emissions
- Energy security costs

The City's position on Climate Change

The City's current position on climate change is guided through two policies, being the Sustainability and Environmental policies.

Sustainability Policy

- The City commits to UN Sustainable Development Goals (SDG) as its Framework on Sustainability and SDG13 for Climate Action forms an integral part of it.
- The City commits to strengthening its adaptation and resilience efforts and engendering them as critical aspects to all future plans, assets and services.
- The City commits to engaging with other governments and businesses to explore opportunities and strengthen their performance on sustainability subjects and to strengthen its monitoring, and verification systems to ensure performance and proactive management as and when required



Environmental Policy

The objective of City's Environmental Policy is to provide guidance and direction for the organisation to minimise its impact on the environment and include climate change considerations in decision making.

- The City recognises the global climate is changing as a result of an increase in the concentration of greenhouse gas emissions in the atmosphere, and that human activity, in part, continues to contribute to increased greenhouse gas emissions along with other naturally occurring factors.
- The City recognises its role in mitigating greenhouse gas emissions from its own operations and assets and leading the way for the community within the geographic boundaries of City of Melville to reduce their own emissions.
- The City recognises that climate change poses particular risks to the community and that the management of these risks will require an adaptation response.
- The City will incorporate the principles of ecologically sustainable development within its decision making process to ensure the City of Melville's environment and resources efficiency improves over time.

Local Government Act

The Local Government Act 1995 (WA) Section 1.3(3): "In carrying out its functions a local government is to use its best endeavours to meet the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity."

Carbon Emissions Footprint within the City of Melville local government boundary

The local government area data is calculated as per the GPC (Green House Gas Protocol for Cities) methodology and uses data from state sources.

The City has a baseline estimate for year 2015 - 2016.

The total emissions summary is provided below (Table 1).

Geographical Boundary Emissions




The City's total annual community emissions have been calculated as 1,181kt CO₂-e. The largest source of emissions by sector in Melville is stationary energy, which mainly comprises electricity consumed by buildings and facilities and accounts for 48% (564kt) of total emissions. Meanwhile, on-road transportation is responsible for 30% of emissions, emissions from solid waste accounts for 7% and wastewater 15%.

Category	Emissions (t CO ₂ e)	Percentage (%)
Stationary Energy	563,825	48%
Transportation	352,558	30%
Waste	87,656	7%
Wastewater	177,057	15%
Total	1,181,096	100%

Table 1: Total Emissions Summary for Melville

The information on City's emissions is transparently communicated to all stakeholders through the website. <https://www.melvillecity.com.au/our-city/city-management/community-outcome-reporting>

Partnerships for action on Community Emissions

Partnerships for action on Community Emissions	
 	<p>We are currently working with Murdoch University to develop an automated system on GPC calculation which will help in easing our monitoring requirements for this information and strengthen our commitment with Compact of Mayors and Cities Power.</p>
	<p>The City's partnership with Switch Your Thinking, is a local government initiative that inspires sustainable action in the community, with a strong focus on reducing greenhouse gas emissions in the community.</p> <p>Melville businesses and community members can benefit from getting involved with Switch Your Thinking initiatives including:</p> <ul style="list-style-type: none"> • Rewards for Residents and Rewards for Businesses discounts on sustainability products like solar panels, rain water tanks, LED lighting and compost bins. • Access to a range of sustainability news and events promoted through our e-newsletters, Facebook page and website.

- Free sustainability workshops held in Melville.
- Opportunities to apply for sustainability awards such as the Switched On Business Award.

Switch Your Thinking are recognised for their innovation and successful track record in carrying out exciting community and Council-based projects to address climate change.

This has furthered our commitment to strengthening our climate action.

Switch Your Thinking

■ In 2020 we signed up to the Switch Your Thinking program, a sustainability initiative aimed at WA Councils, their residents and businesses to reduce greenhouse gas emissions.

The new relationship means the community can look forward to more sustainability workshops and initiatives. It also gives residents the opportunity to sign up for free

monthly energy efficiency tips via SMS – which has been found to reduce household energy usage by six percent.

Switch Your Thinking and Piney Lakes Environmental Education Centre hope to pursue a 'Young Re-Inventor of the Year' program to eligible children in the coming months, as well as a number of other free, fun and interactive sustainable living

workshops for residents of all ages.

If you live in the City of Melville, you are also eligible for a variety of fantastic 'Rewards for Residents' to help you reduce your carbon footprint and keep our community clean and green!

Visit www.switchyourthinking.com/our-projects/rewards-for-residents

This project is a collaborative effort between the City of Melville and Murdoch University. Watch the video on our YouTube channel www.youtube.com/cityofmelville

“I wanted to discourage the buying of ‘new’ things when the lifecycle of so many ‘waste’ items can be renewed with a little love.” – Riette McDonald

We would like to extend our congratulations to Renew By Riette; the first local business to receive the Switched On Business award in the City of Melville. The award is given to businesses that incorporate sustainability into its business. Mrs Riette McDonald's business aims to

end fast-fashion by restyling textiles and glass into original high-quality homewares.

For more information about Switch Your Thinking, or to recommend a business for the Switched On Business award, visit www.switchyourthinking.com



City of Melville Mayor the Hon. George Gear JP checks out Riette's wares at the certificate presentation. Riette's wares can be found on Etsy at www.etsy.com/au/shop/RenewByRiette

Carbon Emissions Footprint of the City of Melville as an Organisation

The City has been monitoring its carbon emissions since 2005, with a trend that demonstrates progress in carbon reduction.

The carbon emission of the City is calculated in compliance with GHG protocol methodology and estimates to a total of 9,364 tCO₂e. The data is publically disclosed at the Community Outcome Reporting Dashboard and has a trend since 2011-2012.

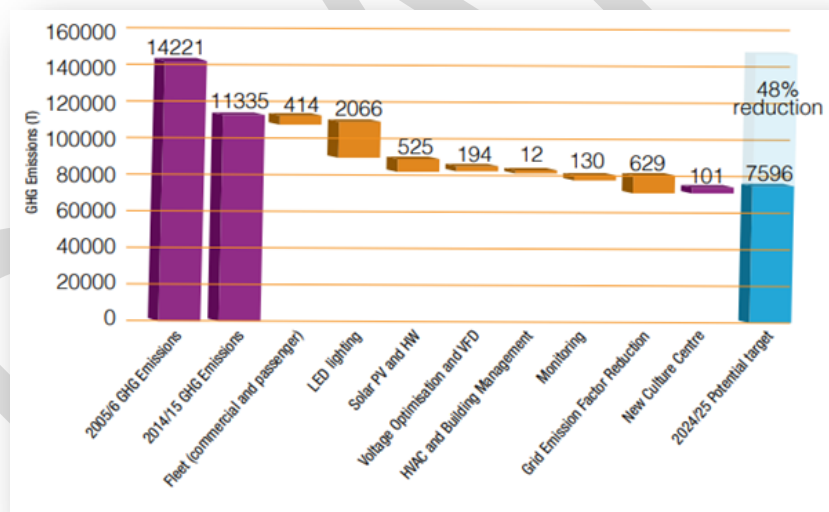
Corporate Environmental Strategic Plan (CESP)

The City highlights its action on sustainable energy management and GHG reductions in its Corporate Environmental Strategic Plan (CESP).

In the CESP, the City adopts an Emission Reduction target of 48% by 2025 on 2005 levels in line with the national commitment under the Paris Agreement.

How the City achieves this target is calculated through the MAC Curve (Marginal Abatement Cost curve) shown below and helps identify priorities and guide decision making.

It is now timely that the MAC Curve is revised with new data and information that has been received through assessments and improvement projects in the past years. The cost of technology and business approach has evolved over time and thus this curve may be updated with revised predictions.



This information is available for the community at <https://www.melvillecity.com.au/our-city/publications-and-forms/technical-services/corporate-environmental-strategic-plan-2016-2025>

Energy – Renewables and Efficiency

As highlighted by Professor Bill Hare, clean electrification with 100% renewables is key for decarbonising Western Australia and the City supports that approach.

In line with this objective the City undertook a state of the art Smart Grid Pilot project that has helped in identification and demonstration of opportunities for improvements that the technology has to offer.

Currently the city has a portfolio of more than 400 KW of Solar PV systems at our facilities and is increasing with approximately 400KW more planned to be installed in the current financial year.

There has been a thorough modelling conducted for City facilities by Murdoch University which provides a list of Solar PV and Battery projects that are optimal for Energy resilience and sustainable emission reductions and will be put forward as business case soon.

Recent Recognitions for the work of the City:

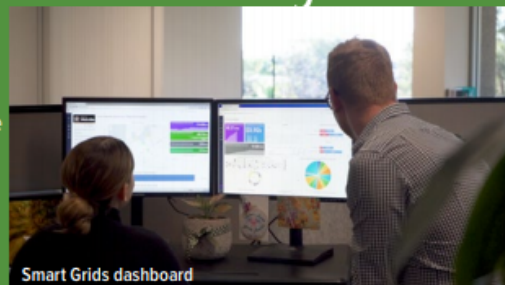
- Selection amongst top four for Innovation in Climate Action by Cities Power Partnership.
- Highly Commended for Action on SDGs by Smart Cities Council Australian New Zealand.

Smart City, Smart Grids system

■ The City of Melville's Smart Grid project, in partnership with Murdoch University, has been highly commended by the Smart Cities Council Australia New Zealand in the category of the UN's Sustainable Development Goals Action Award and a finalist for the Future of Place Award category. The Smart Cities Council is the region's leading smart cities authority, envisioning a world where technology and data are harnessed to create smart, sustainable cities and communities with high-quality living and high-quality jobs.

The smart grid project aspires to

test and optimise the ability of the technology to significantly improve energy efficiency, water efficiency, energy security and the adoption of renewable energy across local government facilities. In doing so, the project furthers the City's efforts to establish sustainable resources management, strengthened monitoring, reporting and verification systems, and significant partnerships for enabling resource efficiencies and emission reductions.



This year, the Smart Cities Council ANZ annual awards recognised 18 cities across seven categories, for their visionary leadership, best practice projects and real-world impact.

Every step forward, no matter how small, contributes towards a sustainable future locally, regionally and globally.

