

CITY CLIMATE LEADERSHIP AWARDS

Melbourne Climate Close-Up

Fast Facts

- With a population of 22 million, Australia is the 52nd most populated country in the world.
- 89% of Australians live in urban areas.
- Australia's greenhouse gas (GHG) emissions in 2013 were 557 million tons of CO₂ (eq.). Australia ranks as one of the highest per capita producers of GHG.
- Australia is a significant exporter of natural resources, energy, and food.
- Australia's abundant and diverse natural resources include extensive reserves of coal, iron, copper, gold, natural gas, uranium, and renewable energy sources.

- Melbourne has been ranked the world's most liveable city by the Economist Intelligence Unit in 2011, 2012 and 2013.
- Melbourne's GDP is \$222 billion, compared to \$213 billion in Sydney. Business services is the number one industry in numbers of employees and establishments, with finance, insurance, and retail trade as second largest in employment and establishments.
- Melbourne emits 5,994 kt CO₂ (eq.) per year.

Population statistics*

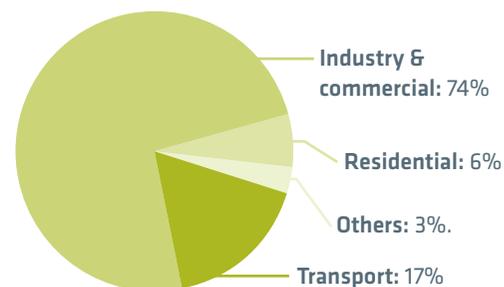


	2012	2030
City	105,381	188,000
Metropolitan Area	4.2 million	5.9 million

* http://www.melbourne.vic.gov.au/AboutMelbourne/Statistics/Documents/Daily_population_model_2013_Report.pdf

Sources: City of Melbourne, <http://www.melbourne.vic.gov.au/aboutmelbourne/statistics/pages/melbournesnapshot.aspx>; Australian Bureau of Statistics, <http://stat.abs.gov.au/Index.aspx?QueryId=719>

Sources of CO₂ (eq.) emissions



*'Other' includes emissions from water and waste. Source: C40

CO₂ (eq.) emissions



Annual CO₂ (eq.) emissions:
2012/13
5,994 kt

Source: City of Melbourne, <http://www.melbourne.vic.gov.au/SUSTAINABILITY/COUNCILACTIONS/Pages/ZeroNetEmissions.aspx>

Efficient Built Environment winner 2013: Sustainable Buildings Program

Summary

Melbourne won the 2013 C40 & Siemens Climate Leadership Awards' Energy Efficient Built Environment category for its Sustainable Buildings Program. This comprehensive approach brings together support for building owners and managers with innovative city-designed and managed property-tax-based financing to improve energy and water efficiency in private commercial buildings in the city.

Challenges

As Australia's fastest growing city, Melbourne has consistently embedded sustainability into its long-term development plans to ensure economically and environmentally responsible growth. In 2003, the City of Melbourne set an ambitious goal for the municipality of zero net emissions by 2020. The administration has devoted key resources to influence improvements to the commercial building sector, which currently generates just over half of the city's GHG emissions. The administration has set a target to reduce carbon emissions from the commercial sector by 25% and those from the residential sector by 20% on business-as-usual scenarios. To achieve its ambitious targets the City of Melbourne is blending "sticks," such as minimum environmental standards on new buildings, with "carrots," including financial incentives, advice and service support for retrofitting.

Actions

The City of Melbourne's Sustainable Buildings Program includes:

- Minimum requirements for new buildings through its Energy Waste and Water policy

- 1200 Buildings Program - supporting building owners and managers to retrofit existing commercial buildings
- Environmental Upgrade Agreements - providing finance through property rates
- City Switch - supporting commercial office tenants
- Smart Blocks - supporting apartment owners to retrofit existing strata-titled buildings

Since its inception two years ago, the 1200 Buildings program has supported 10% of the building sector to retrofit. Approximately 56 signatories (representing 5% of total buildings) have committed to promoting their efforts in retrofitting, and five buildings have used EUAs to access finance to retrofit, generating \$5.6 million of investment and aiming to save 5,660 tons of carbon emissions and \$491,000 in energy costs per year.

Projected Outcomes

If the 1200 Buildings program is successful, it will enable commercial buildings to improve their energy efficiency by approximately 38%, which would lead to the elimination of 383,000 tons of CO₂ each year. The program would also lead to a reduction in potable water use in the commercial sector by 5 giga litres – an important goal for a city with scarce water resources and at risk from the impacts of climate change.

The 1200 Buildings and CitySwitch programs aim to achieve an average rating of 4-star NABERS (Australia's environmental performance standard for buildings) for buildings and 4.5-star for tenancies by 2018.



In detail

Environmental Upgrade Agreements

The City of Melbourne designed the 1200 Buildings Program to encourage the retrofitting of 1,200 commercial buildings – approximately 70% of the city’s commercial building stock responsible for nearly 50% of Melbourne’s CO₂ emissions. Although the program is voluntary, it provides building owners with significant incentives to retrofit their properties. Once a building has committed to improving energy efficiency by 38%, it has access to tailored advice for retrofitting; marketing activities and campaigns; and government-furnished financial incentives, including the program’s key component, Environmental Upgrade Agreements (EUA). Based on similar legislation in other major cities around the world, the EUA is a finance mechanism developed to remove a number of barriers preventing building owners from accessing finance to improve buildings’ energy and water efficiency.

Melbourne’s Environmental Upgrade Agreement (EUA) policy is the world’s first local legislation for existing commercial buildings and represents significant cooperation between public and private sectors, local and state governments in both the development and implementation of the policy. The City of Melbourne conducted numerous consultations with building owners in the Central Business District prior to passing the program into law.

Building owners who sign EUAs with the City of Melbourne are eligible to receive loans for retrofitting projects at 10-15 year, fixed interest rates from private financiers. As loan payments are made from financiers to building owners, the city government levies a property charge at the level of the loan repayment. The Sustainable Melbourne Fund, a government-established but independently advised entity, manages the application and negotiation process, the City administration collects the statutory charges and redistributes revenues, in full, to the financiers. In the case of bankruptcy by building

owners, statutory charges are the first debts to be repaid, thus lowering the risk to financiers of initially furnishing the funds. Further, tenants can benefit from cost neutral energy efficiency upgrades by opting to contribute to the statutory charge.

Although EUAs, like the rest of the 1200 Buildings Program, are voluntary, they are attractive to building owners and financiers for a number of reasons. For building owners, they eliminate the up-front costs of retrofitting, enabling owners not only to pay incrementally for improvements, but also to pass on costs to tenants. For financiers, the presence of government-backed funding for retrofitting diminishes the risk of lending. In fact, an agreement between the National Australia Bank, Eureka Funds Management, and Low Carbon Australia is expected to provide a total of \$200 million of finance for retrofitting projects.

Thus far, the program has enabled five buildings to invest \$5.6 million in retrofitting projects, which will save close to 6,000 tons of CO₂ emissions and \$500,000 in energy costs per year. In addition, 50 buildings have expressed interest in signing up for the EUAs. Other cities, such as Berlin and London, have launched similar programs and financing mechanisms with similar success. All cite the lack of up-front costs to building owners as essential to overcoming disincentives of retrofitting projects.

CitySwitch

In Australia, 80% of GHG emissions from cities stem from commercial office buildings, with half of those emissions generated by base building services and the other half by human activity within the workplace. CitySwitch, a government program started through the Council for Capital City Lord Mayors in 2008, seeks to address this latter half of



In detail

GHG emissions, those generated by tenant behaviour. To do so, it assists commercial office tenants in reducing their environmental footprint through five main mechanisms: facilitation, education, inspiration, incentives, and awards. The CitySwitch Green Office provides tenants with tailored sustainability advice, tools for self-auditing, workshops, networking events, and connections to financiers – all for free.

Due to the ease and (no) cost of the program, the CitySwitch program has been widely taken up across the country. More than 2 million m² of office space in Australia has signed on to CitySwitch. In the State of Victoria, where Melbourne is the capital city, 187 businesses with more than 470,000 m² of office space participate in CitySwitch. During the 2013 CitySwitch Awards, it was announced that as a result of these businesses' actions, 28,000 tons of CO₂ emissions had been saved in 2013.

CitySwitch signatory, the Department of Transport, Planning, and Local Infrastructure (DTPLI) in Victoria, has reported great progress in increasing energy efficiency as a result of its participation in CitySwitch. While a CitySwitch signatory, DTPLI has experienced a 33% reduction in energy use, a 30% increase in staff switching off computers post-work hours, and a 20% reduction in stationary purchase.

CitySwitch is a government-proffered 'carrot' to commercial office owners and tenants interested in reducing energy and water usage. Importantly, it is a low-cost solution to the government, owners, and tenants, as it focuses mainly on education, information, and connection.





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