



COUNTRY	CITY	POPULATION	MITIGATION TARGET	EMISSIONS IN 2019
AUSTRALIA	MELBOURNE	159,992 (GREATER MELBOURNE: 5 MILLIONS)	CARBON NEUTRAL IN 2020 (SCOPES 1&2)	4.9 MtCO <sub>2</sub>

# Melbourne to become 100% renewable-powered thanks to Power Purchase Agreements

Home to more than 5 million people, Melbourne’s reported emissions amounted to 4.9 MtCO<sub>2</sub> in 2019, down by 14% from 5.8 MtCO<sub>2</sub> in 2014.<sup>1</sup> Changes of methodologies apart, the City of Melbourne identifies the surge of renewable energies over the last years as the main driver of this success (CDP, 2020). In early 2019, [Melbourne](#) claimed it became the first Australian Council to cover 100% of its infrastructural power consumption (universities, lighting, corporations, cultural institutions...) with renewable energies. An achievement consistent with the city’s [pledge](#) to reach zero net emissions for all the Council’s public operations by 2020. From 2011-2012 to 2018-2019, the municipality of Melbourne alone (i.e. the Council representing 159,992 inhabitants) [reduced](#) emissions from its operations by 54% (Scope 1, 2, 3), including a 65% drop in Scope 2 emissions, which includes electricity purchase.

## 2017-2020: two PPAs to support regional wind power generation

At the heart of this success is the use of Power Purchase Agreements (PPAs) to supply the city with electricity from renewable sources. In 2017, a first PPA signed under the aegis of Melbourne supported the construction of the new 39-turbine Crowlands Wind Farm, operated by Pacific Hydro firm in Western Victoria, some 200 km away from Melbourne. The new farm opened in early 2019 with a capacity of 80 MW and yearly generation of 264 GWh, of which 88 GWh were purchased by thirteen of Melbourne’s biggest energy consumers. Gathered in a city-led consortium called Melbourne Renewable Energy Project (MREP), none of these actors had to make any direct capital investment into the project, as the agreement alone provides guarantee of financial returns on investment to Pacific Hydro. 40% will be purchased at a fixed price, while 60% will be a market-based price renegotiated every two years. In total, the PPA [avoids](#) the emissions of 96,800 tCO<sub>2</sub>e a year in Melbourne, equal to the annual power consumption of 17,600 households or taking 22,500 cars off the road every year.

The project now supplies energy to power town halls, bank branches, universities and street lights.

In June 2020, Melbourne facilitated the signing of a second collective PPA with seven local players including universities and businesses. The Melbourne Renewable Energy Project (MREP 2) will supply 110 GWh of renewable electricity per year to the purchasing group over 10 years, i.e. 22 GWh more than the first PPA. This electricity will [supply](#) fourteen shopping centres, nine office buildings, seven university campuses and four factories, equivalent to the consumption of 22,000 Australian households a year. MREP 2 is expected to reduce the equivalent of 2.7% of the city’s emissions every year, i.e. 1 MtCO<sub>2</sub> over the 10-year lifetime of the project. This time, MREP2 sources power supply directly from

existing Yaloak South Wind Farm, and the remaining from other wind farm projects in the state of Victoria.

Melbourne’s approach is similar to the Community Choice Agreements (CCA) that exist in the United States. As a local government of a big city, taking the lead of a consortium strengthens the application of smaller actors of the city, but also outside the city boundaries: the deal made in the first MREP only covered one third of the annual amount of power generated of Crowlands Wind Farm, but secures enough outlet for the farm to supply power to other places not part to the deal.

<sup>1</sup> Although these emissions are reported by the “City of Melbourne” in CDP database, we reckon these figures cover all Greater Melbourne Area regarding their proportion. The MREP is driven by the municipality.

### CLIMATE AND ENERGY BENEFITS OF THE FIRST MREP

Source: [Carbon Neutral Cities Alliance](#), [City of Melbourne](#), n.d.

