

**A FIVE YEAR ASSESSMENT OF
ENERGY AND EMISSIONS
PERFORMANCE AT TEACHERS
MUTUAL BANK LTD
2016 - 2020**

MARCH 2021

Overview

Teachers Mutual Bank Ltd, which includes Teachers Mutual Bank, Firefighters Mutual Bank, Health Professionals Bank, and UniBank, has invested significantly over the past five years in improving its environmental performance of its own footprint.

Each year the Bank undertakes an accounting of its environmental and greenhouse gas (GHG) data. This report provides an assessment of the environmental credentials of the Bank, with a focus on Scope 1 and 2 (electricity, gas and fuel use) GHG emissions performance and emissions reduction measures in buildings between FY 2016 – FY 2020.

Highlights

- **In the five years between FY 2016 and FY 2020, the Bank has grown considerably:**
 - + Total assets have increased from \$5.5 billion to \$8.1 billion (+47%)
 - + Members have increased from 177,000 to 210,000 (+18%)
 - + Employees have increased from 461 FTE to 565 FTE (+23%)
 - + The number of offices occupied have increased from 6 to 12
- Over this period, the Bank has reduced its annual GHG emissions by 666 tCO₂-e, from 2,056 tCO₂-e in FY 2016 to 1,390 in FY 2020, **a 32% reduction.**
- Given the increased size and activity at the Bank, this means **a significant reduction in emissions intensity over time:**
 - + In terms of assets, the Bank's emissions intensity reduced by 54% from 0.37 to 0.17 tCO₂-e per million \$ of assets
 - + In terms of employee FTE, the Bank's emissions intensity reduced by 45% from 4.46 to 2.46 tCO₂-e per FTE
- The majority (81%) of the Bank's Scope 1 and 2 emissions are from electricity consumption at its offices, and the rest are from employee vehicle use and natural gas consumption.
- **Since FY 2016, the Bank has invested \$690,000 in emissions reduction measures at its buildings and these have contributed to reductions and avoidance of emissions.**
 - + 83% (\$570k) of total expenditure has been on solar PV and LED installations
 - + \$270k to install 641 solar PV panels in all of its owned offices, which have generated approx. 16% of the Bank's total electricity consumption
 - + \$300k to upgrade lighting in all owned offices with 3,000+ energy efficient LED lamps
 - + Commissioning of a new Building Management System at two of its largest offices to better manage energy consumption
 - + Changes to more efficient staff vehicles and reducing staff salary incentives for cars.
- **Given the Bank's growth in buildings and employee numbers since FY 2016, emissions would have increased even more in a BAU scenario without these measures**
 - + This means that the Solar PV and LED lamps have contributed to an absolute amount of avoided emissions of over 400 tonnes per year, relative to BAU
 - + Over their respective lifespans, the Solar PV panels and LED Lamps are expected to avoid an absolute amount of over 7,000 tonnes in avoided emissions against BAU.
- **The Bank offsets its remaining GHG emissions and has been a net zero bank for all Scope 1 and 2 emissions (electricity and fuel use) since 2012.**
 - + 100% of electricity used by the Bank is sourced from renewable energy and all carbon offsets are purchased from an accredited provider.

Table 1 - Summary of Bank's performance over the five years

Metric	FY 2016	FY 2020	% change between FY 16 – FY 20
Bank's assets (\$ million)	\$5,543	\$8,140	+ 47%
Number of staff at the Bank (FTE)	461	565	+ 23%
Number of offices	6	12	+100%
Scope 1 and 2 GHG emissions (tCO ₂ -e / \$ million)	2,056	1,390	- 32%
Emissions intensity, by assets (tCO ₂ -e / \$ million)	0.37	0.17	- 54%
Emissions intensity, by staff numbers (tCO ₂ -e / FTE)	4.46	2.46	- 45%

Emissions and energy footprint

Teachers Mutual Bank Ltd's emissions footprint is created through both Scope 1 and Scope 2 emissions:

- Scope 1 emissions are direct emissions generated through the consumption of natural gas in buildings and fuel use in staff vehicles.
- Scope 2 emissions are indirect emissions generated through the consumption of electricity in buildings owned or leased by the Bank.

This assessment considers both Scope 1 and 2 emissions for the five year period between FY 2016 and FY 2020. Over this period:

- The number of premises occupied by the Bank has increased, from 6 offices in FY 2016 to 12 office in FY 2020
- A series of significant emissions reduction measures were introduced, primarily installation of Solar PV panels and LED lighting
- The Bank purchased carbon offsets for all Scope 1 and 2 emissions to have net zero emissions for Scope 1 and 2

In FY 2020, the total GHG emissions for Teachers Mutual Bank Ltd were 1,390 tonnes CO₂-e.

This means that the Bank's annual GHG footprint is equivalent to just under 174 households¹.

The majority of emissions each year are generated from the buildings owned by the Bank across NSW, QLD, WA, VIC and the ACT. In FY 2020, emissions from owned buildings represented 81% of the Bank's emissions.

The Bank's emissions have declined each year and the **FY 2020 emissions are 32% lower than FY 2016**, when emissions were 2,056 tonnes CO₂-e.

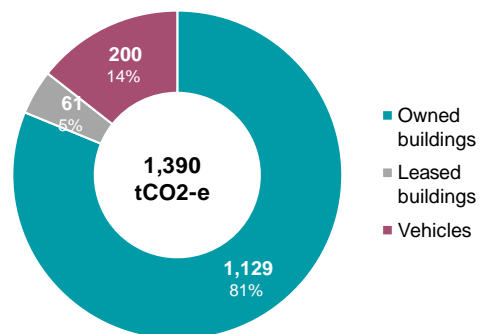


Figure 1 - Teachers Mutual Bank Ltd's GHG emissions for FY 2020, by source

As can be seen in Figure 2, **the Bank has reduced its overall emissions every year since FY 2016 at an average of 133 tonnes per year.**

¹ Based on an average household footprint in Australia of 8 tonnes in 2016, calculated using [this data on household GHG emissions](#) and [this data on number of households](#)

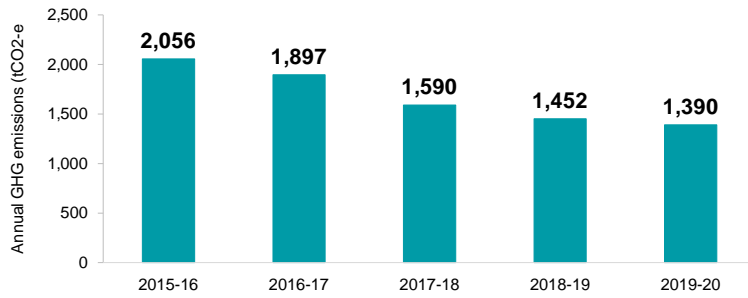


Figure 2 – Bank’s overall Scope 1 and 2 GHG emissions between FY 2016 - FY 2020

The breakdown of emissions by source reveals the single largest declines were in building energy consumption in FY 2017 and vehicle fuel use in FY 2018.

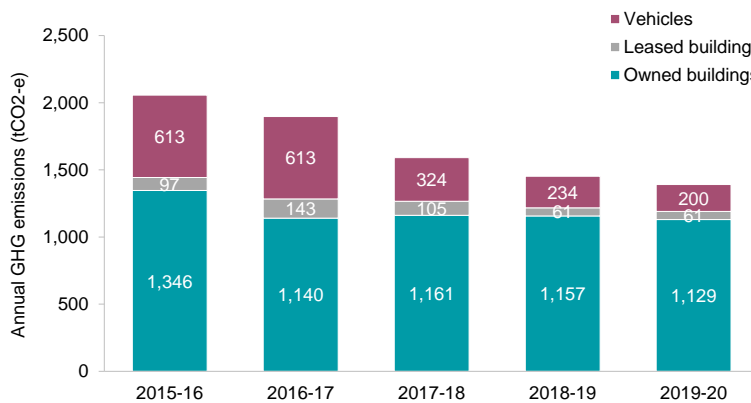


Figure 3 – Bank’s Scope 1 and 2 GHG emissions between FY 2016 - FY 2020, by source²

Offices and energy footprint

Over the past five years, electricity consumption in buildings have generated the vast majority (70-80%) of the Bank’s emissions. There was a significant decline in electricity consumption in FY 2016 and 2017 brought about by Solar PV and LED installations. Since then, emissions at the Bank have **been consistent for the past four years, despite the Bank’s expansion from 6 offices in FY 2016 to 12 in FY 2020.**

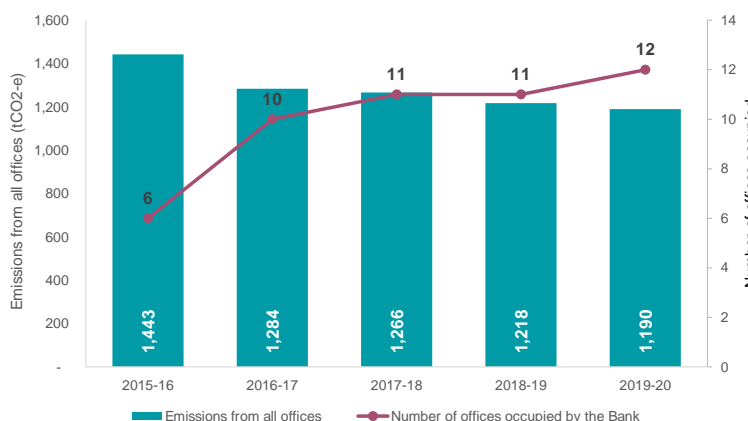


Figure 4 – Bank’s emissions from all offices vs number of offices, FY 2016 – FY 2020

² It should be noted that accurate vehicle data was not available for FY 2017 so the previous year’s figures were used.

Emissions reductions and offsets

Reduced and avoided emissions

The decline in the Bank's emissions reflects a series of emissions reduction measures undertaken by the Bank to reduce its footprint since FY 2016, most notably:

1. 641 Solar Photovoltaic (PV) panels installed on 5 of its owned buildings with a total of 216 kWp output³
2. Over 3,000 lights replaced with energy efficient LED lamps at all of its owned offices and most leased offices
3. The installation of a Building Management System at its Homebush and Parramatta offices to better manage and reduce energy usage associated with working hours
4. The purchase of carbon credits annually from Verified Carbon Standard projects to offset the Bank's residual emissions⁴

In total, these measures represent an investment of \$715,000 over the past 5 years to reduce and offset GHG emissions generated by the Bank's energy use and travel.

Table 2 - Investment in emissions reduction measures and offsets over the past 5 years

Reduction and offset measures	Total investment (\$)	% of total investment
Solar panel installation	\$270,000	38%
LED replacements	\$300,000	42%
New Building Management System	\$120,000	17%
Carbon offsets	\$25,000	3%
Total expenditure	\$715,000	100%

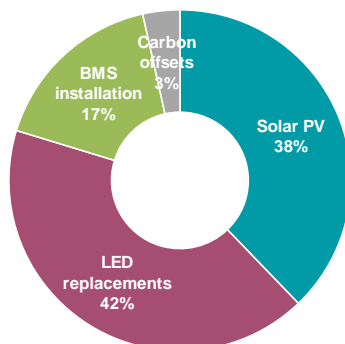


Figure 5 – Breakdown of emissions reduction and offset investment by the Bank between FY 2016 – FY 2020

In addition to these investments which can be quantified and linked to emissions reductions, the Bank has also pursued other measures that have indirectly reduced or avoided emissions:

- Procuring carbon neutral paper for the majority of its paper needs
- Switching staff vehicles to smaller cars, which reduces fuel consumption and associated GHG emissions, and reducing staff salary incentives for cars
- Upgrading the air-conditioning system at two of its main offices to improve energy efficiency

Avoided emissions from Solar power and LED replacements

The Bank's reductions of total emissions of 666 tCO₂-e does not provide a complete picture. This is a relative reduction against the baseline of FY 2016, but not against BAU emissions that *would* have been generated as the number of offices and staff doubled, and where emissions would have been

³ PV panels were installed in 4 buildings in 2016 (Homebush, Rooty Hill, Parramatta, UniBank Perth). In 2018, solar PV panels were installed in a fifth building in Brisbane, QLD while the UniBank Perth building was sold in FY 2020.

⁴ The Bank purchases accredited carbon offsets for its residual emissions annual and the most recent purchases have been renewable energy projects in India from [South Pole](#), which has certified the Bank as a Climate Conscious Company.

higher. That is, the solar panels and LEDs have to work 'harder' to contribute to the 32% reduction as it is counted across 12, rather than 6 buildings.

Over the period from FY 2016 – FY 2020, the solar panels contributed between 14 – 19% of the Bank's annual electricity and generated a total of 932,516 kWh. This avoided 762 tCO₂-e and represents an absolute amount of *avoided* emissions compared to BAU.

As the chart below, the emissions avoided have ranged from 160 – 213 tCO₂-e, or an average of 190 tCO₂-e.

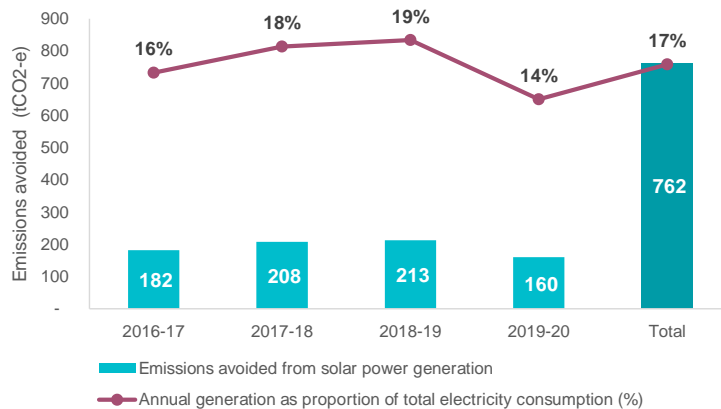


Figure 6 - Solar power generation and avoided emissions between FY 2016 – 2020

In 2016, the Bank also replaced its lighting with more efficient LED lamps at all of its owned offices and most leased offices.

Exact electricity consumption figures have been more challenging to isolate for the LED lighting compared to the Solar PV. It is estimated however that the replacements contributed to an absolute reduction of at least 286,347 kWh, which helped avoided 239 tCO₂-e of GHG emissions.

That means that together the Solar PV and LED replacement measures **have contributed to an absolute amount of avoided emissions of over 400 tonnes each year relative to BAU.**

Therefore over their expected lifespans, the currently installed capacity of Solar PV and LED lamps are expected to avoid an absolute amount of between 6,200 and 6,700 tonnes against BAU⁵.

⁵ The expected lifespans for Solar PV panels and LED Lamps are 25 years and 10 years, respectively. The expected range for emissions avoided is based on the forecast of continued decarbonisation and reduction in the emissions intensity of State and Territory electricity grids of between 20 – 40% over the next 20 years (which will reduce the emissions associated with renewable energy generation/more energy efficient lighting).

For further information on this: https://www.aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/inputs-assumptions-methodologies/2020/2020-forecasting-and-planning-inputs-assumptions-and-scenarios-report-iasr.pdf?la=en

Emissions intensity

It is common practice for organisations to track and report both their *absolute* emissions and their *relative* emissions over time. This enables an understanding of how emissions have changed in line with business activity and comparison across organisations of varying size and complexity. At an international level, for example, it is accepted practice for countries to use emissions per unit of GDP as an intensity metric. If GDP grows faster than emissions, this suggests that there are efficiency improvements in terms of emissions generated relative to economic activity.

Teachers Mutual Bank's emissions reductions can be placed in context by considering the intensity of emissions, i.e. the rate of change in its emissions relative to change in business activity. The Bank uses its total assets as an emissions intensity metric (tCO₂-e per \$ million of assets). This includes all assets (e.g. cash, securities, loans, property, plant, etc.) owned by the Bank during the financial year and is a reflection of its size as an organisation.

Over the past five years, Teachers Mutual Bank has increased its assets each year while reducing emissions. **Since FY 2016, Teachers Mutual Bank Ltd has increased total assets by 47% while reducing its underlying emissions by 32%.**

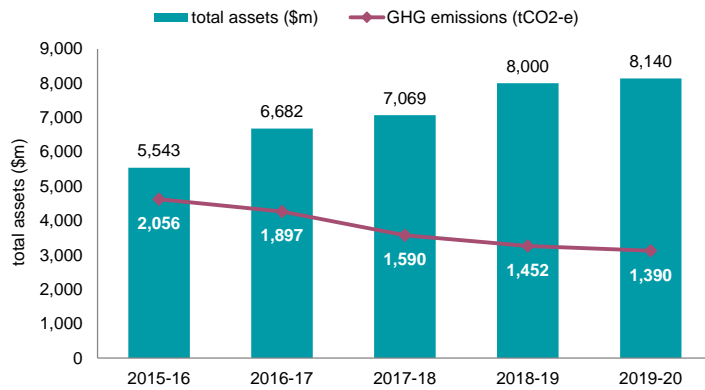


Figure 7 – Bank's Scope 1 and 2 GHG emissions compared to assets, by year

In other words, Teachers Mutual Bank Ltd has **halved its emissions intensity** from 0.37 to 0.17 tCO₂-e per million \$ of assets.

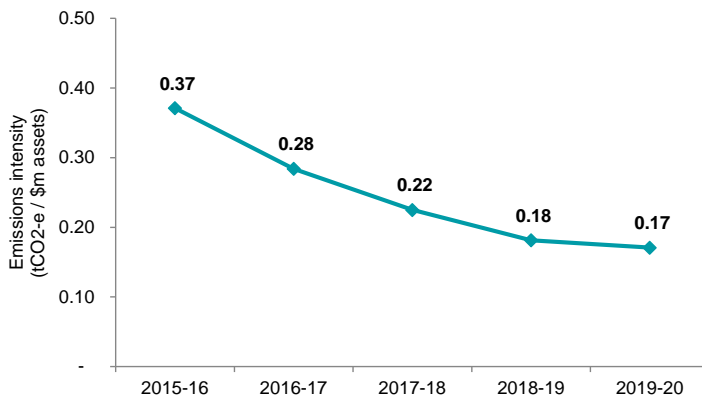


Figure 8 - GHG emissions intensity per assets, by year

Another way to look at the Bank's emissions intensity is to compare the change in emissions generated against the number of staff at the Bank. In this regard, the Bank's emissions intensity has also nearly halved from 4.46 to 2.46 tCO₂-e per FTE.

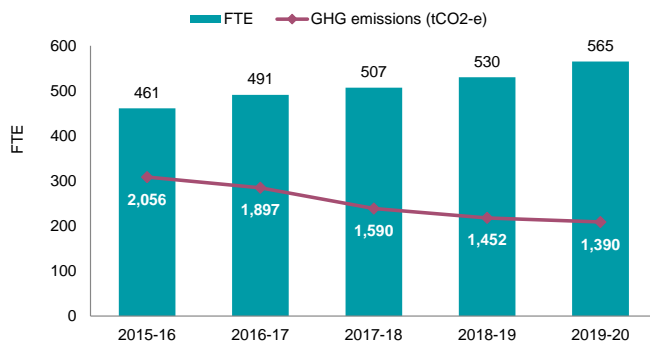


Figure 9 - Bank's Scope 1 and 2 GHG emissions compared to staff numbers (FTE), by year

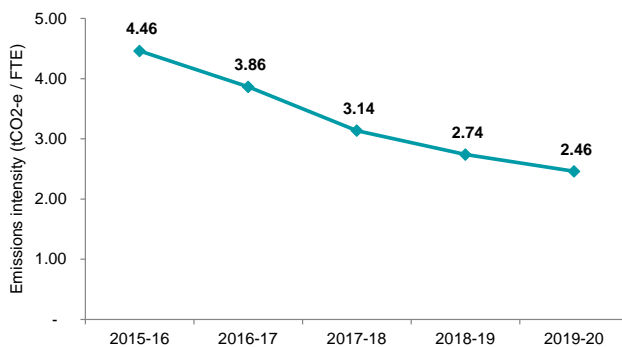


Figure 10 - GHG emissions intensity per FTE, by year

TMBL's performance on emissions intensity per \$m in assets and FTE compares favourably with other banks in Australia over the past five years, as shown in the following charts.

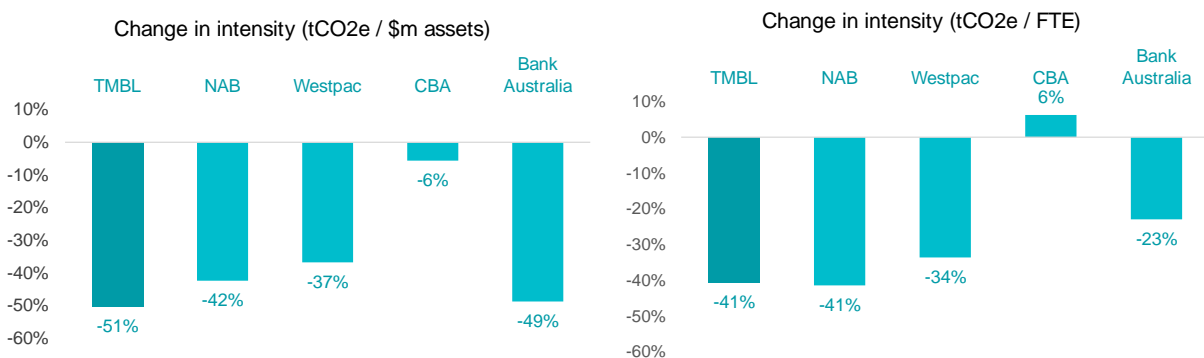


Figure 11 - Change in Scope 1 and 2 GHG emissions intensity for 4 of TMBL's peers between FY 2016 - FY 2020, by assets and by FTE⁶

Between FY 2016 and 2020, TMBL's Scope 1 and emissions fell at an equal or faster rate relative to assets and FTE than these 4 other banks.

⁶ Calculations for other banks based on public figures sourced from [NAB Annual Report 2020](#); [Westpac Annual Report 2020](#); [CBA 2020 Sustainability Reporting](#); [Bank Australia 2020 Impact Report](#)

Report preparation

This report has been prepared by The Incus Group and is based on data provided to The Incus Group directly by Teachers Mutual Bank Ltd and data provided by its suppliers, Ilum-A-Lite and AGL. Teachers Mutual Bank Ltd includes Teachers Mutual Bank, Firefighters Mutual Bank, Health Professionals Bank, and UniBank.

All analyses were performed on data as made available by the Bank between August 2016 and January 2021 and no verification or audit of the underlying data was undertaken. The greenhouse gas emissions data reported here for Teachers Mutual Bank Ltd are based on calculations using best practice guidance from the [Department of Industry, Science, Energy and Resources](#) and [Environment Protection Authority Victoria](#)

This report was prepared in accordance with the scope of work agreed with Teachers Mutual Bank Ltd and is based on generally accepted practices and standards at the time it was prepared.

About The Incus Group

The Incus Group is a purpose-driven consultancy that guides organisations through the life cycle of understand, measuring and managing their impact. Our expertise extends from the development of strategy through to impact measurement and capacity building and we seek to work with organisations to measure what matters and convert best intentions into successful outcomes.

For more information, please visit www.theincusgroup.com or contact info@theincusgroup.com

