

# Metro Trains: On track to energy efficiency



Wattly and Northmore Gordon worked alongside Metro Trains and the contractors over a period of almost three years to ensure every step of the Victorian Energy Upgrades program were met to the high standards required by the rules and programs regulator. We enjoyed their enthusiasm and professionalism towards recognising the energy savings and carbon emissions achieved through the Comeng Life Extension.



- Metro Trains Melbourne

## The Client

Metro Trains Melbourne operates 226 six carriage trains across 1,000 kilometres of track, transporting 450,000 customers each day. Metro Trains is owned by and draws on the strengths and experience of three leading rail industry organisations: Hong Kong's MTR Corporation, Australia's John Holland Group and UGL Rail, a division of United Group Limited.

## Key Facts

<b>Equipment Upgraded</b>	136 x Comeng Train Units Upgraded
	14,100 lights replaced
<b>Annual Energy Savings</b>	~2,000 MWh PA
	Carbon Abatement: ~2,200 tCO <sub>2</sub> e PA, OPEX: ~200,000
<b>Certificate Value</b>	\$570k / < 1 year payback
<b>Program</b>	Victorian Energy Upgrades (VEU) using Project Based Activities (PBA)
<b>Wattly Partner</b>	Northmore Gordon

## The Project

Every year 1,000s of fluorescent tubes would require replacement on the aging Comeng train fleet to ensure uniform lighting levels and colour throughout all carriages. As part of the Comeng Series Train life extension project Metro Trains replaced 14,100 fluorescent tubes with high efficiency LED replacements to improve reliability and energy efficiency. The Comeng Life Extension project updated the interior and exterior of Melbourne's fleet of Comeng trains in order to keep them in service until potentially 2027 and beyond.

## Challenges

- High Maintenance overheads
- Desire to extend the life of existing fleet

## Additional Outcomes

- Removal over more than 14,000 fluorescent tubes from service and the recycling of the small amounts of mercury that exists in the tubes
- Reduced maintenance cost by 95% with reliability and more consistent lighting levels at all times
- The LED lighting upgrades means the trains will spend more time in service

## Our Role

Wattly and Northmore Gordon worked with Metro Trains and TTM Rail to ensure the specialised lights for the train sets were approved under the VEU. They provided a sophisticated approach using a sampling measurement and verification approach to allow a subset of the fleet to be measured and the savings calculated for the entire fleet. They worked through many stages of the VEU PBA methodology to ensure certificate registration and payment to Metro Trains.



Wattly is a leader in environmental certificate creation and trading. We have created the most certificates of all Accredited Persons under the Victorian Energy Upgrades program, an Accredited Certificate Provider in the NSW Energy Savings Scheme, and registered agent under the Federal Renewable Energy Target.

We've provided \$100m of financial incentives for energy efficiency and renewable energy projects at over 35,000 commercial, industrial and residential sites. This has saved our clients and partners gigawatt hours of energy, millions of dollars and reduced greenhouse gas emissions by over 5 million tonnes of CO<sub>2</sub>e.

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