

Downtown Line achieves BCA Green Mark Gold^{PLUS}

You might know that we have green buildings in Singapore, but did you know that we also have rail lines which incorporate green features? In fact, Singapore now has two rail lines which have achieved the BCA Green Mark certification!

The Downtown Line (DTL) received the BCA Green Mark Gold^{PLUS} certification in October 2017 for its environmentally-friendly features. This has been the highest tier ever achieved by a rail line to date. The Circle Line (CCL) was presented with the BCA Green Mark Gold award in 2010.

The assessment and grading were based on the Green Mark for Rapid Transit System (RTS) framework, jointly developed by the Land Transport Authority (LTA) and the Building and Construction Authority (BCA).

The DTL has the following green features:

- A regenerative braking system, which channels the energy produced by a train during braking to power other nearby trains or train stations.
- Air-conditioning systems with energy-saving features to minimise energy usage, enough to provide power to about 1,080 HDB 5-room flats for a year.
- Solar panels at Gali Batu Depot, which generate about 1,150 MWh of energy per year, used to offset the power consumption of the Depot



Solar panels at Gali Batu Depot

Besides energy savings, the DTL also incorporates water-saving features, such as recycling condensate water from air-conditioning systems in DTL stations to offset cooling tower water demand.

The design of DTL also encourages commuters to adopt active, healthy and environmentally-friendly lifestyles. Commuters can cycle and easily park their bikes at more than 4,800 bicycle parking lots conveniently located at the stations, while sheltered walkways shield commuters from the elements.



Bicycle parking lots at Bendemeer Station

Mr Ngien Hoon Ping, Chief Executive of LTA, said: "As a key agency involved in a vast number of infrastructure projects throughout Singapore, LTA recognises that it plays an important role in being committed to practices that promote environmental sustainability. Therefore, throughout the planning, design and construction of the Downtown Line, we carefully considered the environmental impact of our works, and put in various measures to ensure that the line can operate sustainably while minimising impact to our environment."

Mr Hugh Lim, Chief Executive of BCA, added: "Singapore's green journey is not limited to the energy efficiency of buildings. The infrastructure at our MRT lines is another area where we are working to extend the reach of environmental sustainability beyond buildings. It requires upfront planning and consideration to incorporate green features into new rail lines. BCA will continue to work with LTA and other public agencies to green their buildings and infrastructure, and deliver a more sustainable built environment for Singaporeans."