



BCA Green Mark Gold Award for MBFC Phase 1 (Commercial) FACT SHEET

- MBFC Phase 1 (Commercial) will be conferred the BCA Green Mark Gold Award on 22 May 2008.
- MBFC Phase 1 (Commercial) consists of:
 - Tower 1 (33 storeys, approx 57,763 square metres or 620,000 square feet of Net Floor Area)
 - Tower 2 (50 storeys, approx 95,947 square metres or 1,030,000 square feet of Net Floor Area)

KEY ENVIRONMENT-SAVING FEATURES

- **Environmental Management System for the construction process**
 - Main contractor and consultants are ISO 14000 certified
 - Specific environment management programme for the Piling Contractor (Tiong Seng Contractors (Pte) Ltd)
 - Separation of sand and marine clay from boring operation
 - Recycling of steel waste
 - Use of Geo-polymer as a stabilizing fluid for bored piling operation
 - Segregation of wastes for incineration and recycling
- **Environment conserving features and systems**
 - Use of an energy efficient curtain-wall glass cladding system for an overall building Envelope Design that delivers low Energy Thermal Transfer Value (ETTV) and a high Energy Efficiency Index (EEI); both of which meet with BCA requirements.
 - Use of paints with low Volatile Organic Compounds (VOC) that are not hazardous to human and environmental health

- Environmental features incorporated into MBFC amount to a total savings of 22.5 percent of the total energy bill such as use of energy efficient lighting, air-conditioning, lifts and escalators and extensive use of private metering to monitor energy use.
- Use of the District Cooling System (DCS) to provide efficient air-conditioning maintained at 23.5 degrees Celsius, plus or minus one degree.
- **Extensive provision of green space**
 - 36% of the total land area of 20,505 square metres or 2,200,000 square feet has been allocated to “green spaces” to reduce urban heat and energy consumption through roof-top gardens, landscaped plaza and planting zones between Tower 1 and 2.
- **Water conservation**
 - Taps in the building are fitted with self closing systems and flow regulators to monitor leaks, while sea water is used for in early stages of the piling work, calculated to save 240,000 cubic metres or the equivalent of 117 Olympic-sized pools worth of potable water during construction.
- **Other innovative features included in the design are:**
 - Ductless car park mechanical ventilation system with Carbon Monoxide (CO) sensors
 - Provision for connection to the Central Pneumatic Waste Collection System via the Common Services Tunnel (CST)
 - Solar powered aircraft warning light on the roof
 - Use of car park guidance system to reduce parking time and save emissions etc.
- **Indicative savings**

Environmental features incorporated into MBFC have been calculated to reduce the annual energy bill by 22.5% compared to a standard office development of the same scale, that comply to building codes on Energy Conservation. Examples of individual savings include:

- Motion sensor lighting control installed in the toilets will bring an estimated savings of \$30,000 per year on power consumption
- Installation of heat recovery wheel savings worth \$46,000 per year on energy consumption
- Use of LED lights for EXIT signs and main lobby saving \$21,000 per year on power consumption
- Usage of sea water for ground improvement works bringing in a massive \$280,800 worth of savings on water consumption.
- **Energy Audit**
 - Energy Audit Specialist, Genergy Global Pte Ltd has been engaged to conduct an energy audit using energy simulation software.

About Marina Bay Financial Centre

Marina Bay Financial Centre is being developed by a joint venture by three of Asia's most experienced and trusted property developers – Cheung Kong (Holdings)/Hutchison Whampoa, Hongkong Land and Keppel Land.

The Consortium will manage the development of the prime waterfront 35,500 square metre site in the heart of Singapore's new downtown, including best-in-class office space, high-end residences and complementary retail and recreational facilities. The same joint venture partners developed the adjacent One Raffles Quay, now tenanted by leading global financial institutions. Please see <http://www.mbfcc.com.sg>