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Sustainability

Marina Bay Sands' global sustainability programme, Sands ECO360, guides the company in responsible operations to reduce its overall environmental impact. Sands ECO360 integrates the company's best practices, technologies and methodologies in the area of sustainability across all properties. It consists of four priorities: **Green Buildings, Environmentally Responsible Operations, Green Meetings** and **Sustainability Education and Outreach**.

The integrated resort's efforts have been recognised by international bodies and certifying boards. Marina Bay Sands is the first MICE facility in South East Asia to obtain the ISO 20121 Sustainable Events Management System certification in February 2014 and the first MICE facility in Singapore to adopt the Singapore Tourism Board's sustainability guidelines for the MICE industry in 2013. In 2018, Marina Bay Sands was recertified as a Green Mark Platinum building by the Building and Construction Authority.

The integrated resort also clinched the prestigious 2015 UFI Sustainable Development Award by the Union of International Fairs (UFI) and the IMEX (Frankfurt) Green Supplier Award 2015. In the Pacific Asia Travel Association (PATA) Grand and Gold Awards 2016, Marina Bay Sands was named a Grand Award Winner for its Sands ECO360 Meetings Programme.

Fun Green Facts

Reducing Energy Consumption

- Since 2012, Marina Bay Sands has reduced its carbon footprint by 34 per cent.
- The integrated resort's S\$25 million Intelligent Building Management System has over 110,000 control points that allows automated controls over lighting, heating, air-conditioning and water supplies for the entire property, which helps the integrated resort to save over 46 million kWh of energy a year. The system is also capable of monitoring electricity usage and air quality.
- 90 per cent of Marina Bay Sands' property lightings, or over 60,000 lightings, use energy efficient lighting.
- The extensive glass façade across its property allows abundant natural daylight to illuminate indoor areas, displacing the need for energy-intensive lights. Photo sensors are also used to detect the brightness of the sunlight and the lights will be adjusted accordingly, thus helping to reduce energy consumption.
- The property is connected to a District Cooling System. District cooling is an energy and cost efficient method that produces and distributes chilled water via common service tunnels. Its air-conditioning makes use of water-cooled chillers, which are about 80 per cent more efficient than air-cooled models.
- Heat emitted from these chillers is reclaimed by heat pumps to provide hot water to the hotel and some restaurants to reduce energy consumption.
- The iconic Sands SkyPark is a 12,400 m² green oasis of more than 700 trees and palms, some over five metres tall. This massive 'green roof' helps to absorb and reduce heat entering the

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building, reducing the workload of chillers. “Green roofs” are also located throughout the development.

- To further improve energy efficiency, Marina Bay Sands installed a 145 kWp solar power system atop the Sands SkyPark – the highest location of solar panels in Singapore. Covering an area of 880 m² atop the SkyPark walkway, the roof of the restaurant Spago, and the roofs on the elevator shafts of Tower 1 and Tower 3, the 536 solar panels are targeted to generate enough energy to power all lighting on the Sands SkyPark and will enable Marina Bay Sands to reduce carbon emissions by 70 tonnes every year.
- Large scale art installations across the property – called the ArtPath – also play a role in Marina Bay Sands’ sustainability efforts:
 - *Rain Oculus* (The Shoppes and ArtScience Museum): The water feature collects rain water which is recycled and used to fill the canal at The Shoppes at Marina Bay Sands. At the museum, the curved shape of its roof collects rain water that cascades into a pool below. The water collected is recycled in the building’s flush water bathroom systems.
 - *Wind Arbor* (Hotel Atrium Façade): The stainless steel net, comprising 260,000 aluminum metal flappers, reflects light when the flappers move. This sculpture acts as a shield from the sunlight, preventing the building’s temperature from rising too rapidly. This cuts down the energy consumption needed to cool the building.

Environmentally Responsible Operations

Marina Bay Sands’ sustainable purchasing policy provides guidelines to its vendors, encouraging them to provide solutions, materials and goods that are eco-friendly.

Since October 2013, Marina Bay Sands no longer serves shark fin in restaurants it owns and operates. Shark fin dishes are also not offered at events held at Sands Expo and Convention Centre.

In October 2017, the integrated resort announced a landmark partnership with the World Wide Fund for Nature in Singapore (WWF) to improve responsible procurement within Marina Bay Sands and transform its supply chain. Under the programme, the integrated resort is also supporting four aquaculture farms in Malaysia in their journeys towards sustainable farming. By 2020, Marina Bay Sands aims to have 50 per cent of all seafood by volume sourced responsibly.

The integrated resort has its own Herb Garden located outside of Hotel Tower 1. Measuring 170 square metres, the garden supplies approximately 80 types of herbs, to restaurants owned and operated by Marina Bay Sands. A drip irrigation system, powered by solar panels, is used to water plants and shrubs, thereby avoiding wasteful spraying. Every day, 800 - 1,200 g of herbs are harvested at the Herb Garden and used in restaurants owned and operated by Marina Bay Sands.

Marina Bay Sands, with the help of technology, has enhanced its paperless hotel check out options, saving over 20,000 sheets of paper a month.

Food waste is managed through five *anaerobic* digesters. In 2018, the integrated resort diverted a total of 752 tonnes of food waste. It also carried out food donation programmes with local charities, contributing 8.4 tonnes of bread to Food from The Heart and 2 tonnes of hot food to Food Bank Singapore.

In July 2016, Marina Bay Sands rolled out an innovative condensate water recovery project to collect and recycle water that drips from the 3,000 air-conditioning units across its three hotel towers. The

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project enables the integrated resort to save an average of 60,000 liters of water a day – four times the typical monthly water consumption in an average HDB flat in Singapore. The recycled condensate water is used for the water features around the property, exterior landscaping and to irrigate plants at the hotel.

Green Meetings

Marina Bay Sands provides meeting organisers with sustainable options to achieve their green meeting goals. Since the Sands ECO360 green meetings programme was launched in 2013, the integrated resort has seen the number of sustainable events increase exponentially – from just five in 2013, to over 480 in 2018.

Several sustainable practices under the Sands ECO360 meetings programme include:

- **Sustainable Event Advisory Services** to help clients craft sustainable meetings using the **Sands ECO360 Meetings Planning Tool**.
- **Sands ECO360 Event Impact Statement** provides a post-event sustainability report that captures an event's sustainability highlights and provides a comprehensive summary of energy and water consumption at a glance.
- **Harvest Menu** offers locally sourced food and beverage options to reduce Food Miles and lower the emission of greenhouse gases during transportation.
- **Earth-friendly Menu** features organic, Fair Trade or Rainforest Alliance certified, responsibly produced or locally sourced ingredients.
- **Sub-metering of MICE floors** allows organisers to effectively track energy usage across specific areas
- **Waste management** with recycling bins and sustainably disposing of leftover food and materials
- **Motion sensors** are fitted to lights in all 250 meeting rooms, saving up to 2.9 million kWh of energy each year.

Sustainability Education and Outreach

- Marina Bay Sands has a company-wide education programme to raise awareness of sustainability and encourage environmentally-friendly behaviour. The programme includes paper reduction challenges, recycling drives, and eco-film screenings.
- The integrated resort also participates in Earth Hour, an annual worldwide event organised by WWF
- Over at The Shoppes at Marina Bay Sands, several sustainability initiatives and programmes have been introduced to engage and educate tenants in going green. These include holding competitions such as the Retail Tenant Energy Challenge to raise awareness among tenants on the importance of energy conservation, and arranging for the collection of recycled items from each tenant on a daily basis and providing them with a detailed waste assessment.

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Other Green Accolades

Marina Bay Sands, together with Las Vegas Sands in the United States where The Venetian and The Palazzo form the world's largest LEED-certified* building, continue to set new standards in sustainable business practices. The properties are recognised globally for their innovative sustainability initiatives and practices.

- January 2019 – Las Vegas Sands Corp. was once again recognised as a world leader for climate change and water by international non-profit environmental disclosure platform CDP.
- November 2018 – ArtScience Museum at Marina Bay Sands was awarded the prestigious LEED (Leadership in Energy and Environmental Design) Gold certification under the 'Existing Buildings: Operations & Maintenance' rating system, making it the first museum in Asia Pacific to be given this honour.
- September 2018 – Las Vegas Sands Corp. was once again recognised by the Dow Jones Sustainability Indices (DJSI) for its industry-leading corporate sustainability efforts. Sands is the only Integrated Resort company included on the DJSI North America.
- January 2018 – Marina Bay Sands was recertified as a Green Mark Platinum building by the Building and Construction Authority.
- January 2018 – Marina Bay Sands received the ASEAN Green Hotel Award 2018-2020 and the ASEAN MICE Venue Award 2018-2020 at the 2018 ASEAN Tourism Standards Awards, in recognition of its green MICE initiatives and contributions to sustainable tourism.
- October 2017 – The Shoppes at Marina Bay Sands was named a winner at the inaugural National Environment Agency (NEA) 3R Award for Shopping Malls, in recognition for its exemplary efforts in waste minimisation and recycling.
- August 2017 – Marina Bay Sands was recognised as a leading sustainable organisation at the Singapore Green Hotel Award 2017-2018. Presented by the Singapore Hotel Association and supported by the Building and Construction Authority, National Environment Agency, Public Utilities Board and the Singapore Tourism Board, the award celebrates environmentally-friendly initiatives implemented by hotels in Singapore.
- October 2016 – Las Vegas Sands Corp. was recognised once again as a world leader in climate change response by environmental ranking agency CDP. The company was first listed on CDP's "Climate A List" in November 2015. The prestigious and exclusive list only features companies that are assessed to have outperformed others in managing, measuring and verifying the carbon footprint of their operations. The company first received this accolade in 2013.
- October 2016 – Marina Bay Sands was awarded the Distinction Award in the 3R Awards for Hotels by National Environmental Agency (NEA) and Singapore Hotel Association (SHA). The award recognises Marina Bay Sands for its innovative approaches to waste minimisation.
- July 2016 – Marina Bay Sands was named a Grand Award Winner at the Pacific Asia Travel Association (PATA) Grand and Gold Awards 2016 for its Sands ECO360° Meetings Programme. The awards celebrate creative and effective ways of advancing tourism in Asia Pacific while following sustainable principles. Marina Bay Sands was the only winner in the Environment category.

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- July 2016 – Marina Bay Sands attained the MICE Sustainability Certification (Intermediate Level for venue). As the first venue in Singapore to achieve this certification, the integrated resort has met and gone beyond the basic certification criteria with its additional green efforts – such as providing event impact statements on energy and water consumption to its clients, as well as outfitting its venue with energy saving solutions. Awarded by the Singapore Association of Convention and Exhibition Organisers & Suppliers (SACEOS), this award covers nine different categories such as audio-visual, F&B, hotel and venue.
- July 2016 – Marina Bay Sands attained the Merit Award in the National Environmental Agency (NEA) 3R Packaging Awards, in recognition of its reusable plastic basket and pallet exchange programme. This programme was conceived in-house to help the integrated resort's suppliers avoid the use of carton and styrofoam boxes when delivering supplies to the property.
- In 2015, Marina Bay Sands continues to be recognised for its ongoing green efforts, achieving several prestigious green accolades from around the world. These include the 2015 UFI Sustainable Development Award by the Union of International Fairs (UFI) and the IMEX (Frankfurt) Green Supplier Award 2015.

** The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is the nationally accepted benchmark for the design, construction and operation of high-performance green buildings in the United States*