

#### News Release

24 May 2012

## TURNING GREEN BUILDINGS INTO "GOLD" AND "PLATINUM" CDL – MOST HONOURED PRIVATE DEVELOPER AT BCA AWARDS 2012 AND BCA GREEN MARK AWARDS TO DATE

66 Green Mark Awards including 23 Platinum and 21 Gold<sup>Plus</sup> Awards since 2005

City Developments Limited (CDL) will emerge as the most accorded private property developer at the Building and Construction Authority (BCA) Awards 2012 Ceremony which will be held at Resorts World Sentosa this evening. CDL will add another 25 awards to the honours roll, including 13 Green Mark awards, to amass a portfolio of 66 Green Mark awards to its name, of which 23 will be of the highest-tier Platinum, the most of any private developer on both counts. This will mark CDL as the most illustrious Green Mark-accorded private developer to date, affirming its leadership and outstanding achievement in its contributions to sustainable developments in Singapore.

For the past 49 years, CDL has been shaping Singapore's built environment by pioneering innovative spaces that are testament to its commitment to sustainability, quality, productivity, design and construction excellence. As buildings account for approximately 40% of the Earth's carbon emission, the Company has been a fervent champion of green buildings and environmental sustainability in Singapore for over a decade. It is committed to making concerted efforts to conserve as it constructs, while engaging and influencing its stakeholders to be more environmentally-conscious. Since 2011, CDL has also upgraded its target of attaining at least a Green Mark Gold rating to a minimum Green Mark Gold<sup>Plus</sup> rating for all new developments.

The continual challenge to develop sustainable developments which are not only constructed responsibly, but are also cost and energy efficient to manage, is led by CDL's corporate green strategy. It invests between 2% and 5% of a development's construction costs on green innovations and infrastructure. HAUS@SERANGOON GARDEN – which created a new milestone as the first landed residential estate in Singapore to achieve the Green Mark Platinum Award – is one sterling example having incorporated extensive sustainable construction methodologies. For instance, it is the first to collectively include solar technology, rainwater harvesting system and air-conditioner heat recovery system in a landed residential estate. Beyond new developments, CDL has also been greening its existing buildings, with Republic Plaza being accorded the Green Mark Platinum award in the existing building category.

"CDL has been a strong supporter of the BCA Green Mark scheme since its inception in 2005. In the early years, we faced challenges with green expertise and also buy-in from industry stakeholders. But today, I am glad that we persevered, continued to encourage and lead our industry peers to embrace sustainability – greening one building at a time, for a more sustainable Singapore. We will continue to focus on incorporating innovative sustainable features in our developments to forge a groundbreaking green path ahead" said Mr Kwek Leng Joo, Managing Director of CDL.

CDL's efforts to 'green' Singapore's built environment have been well-recognised at the BCA Awards. In 2011, it was the first and only recipient of the prestigious BCA Green Mark Platinum Champion Award and has remained the sole private developer to receive the BCA Built Environment Leadership Platinum Award. In 2008, it was the first winner of the inaugural BCA Green Mark Champion Award.

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## ANNEX 1

CDL BCA AWARDS 2012 DEVELOPME	NTS
GREEN MARK PLATINUM AWARDS	<ul> <li>7 &amp; 9 Tampines Grande*</li> <li>City Square Mall*</li> <li>HAUS@SERANGOON GARDEN – First Green Mark Platinum for a landed residential development</li> <li>Redevelopment of Lucky Tower at 57 Grange Road</li> <li>Republic Plaza* – BCA's 100th Green Mark Platinum development</li> <li>South Beach (Commercial)</li> <li>South Beach (Residential)</li> </ul>
GREEN MARK GOLD <sup>PLUS</sup> AWARDS	<ul> <li>11 Tampines Concourse*</li> <li>Blossom Residences</li> <li>The Palette</li> <li>The Rainforest</li> <li>UP@Robertson Quay</li> </ul>
GREEN MARK GOLD AWARDS	<ul> <li>Exchange Tower, Bangkok</li> </ul>
UNIVERSAL DESIGN AWARDS	<ul> <li>Cliveden at Grange (Silver)</li> <li>The Residences at W Singapore Sentosa Cove (Silver)</li> </ul>
CONSTRUCTION EXCELLENCE AWARDS	<ul> <li>Tribeca (Merit)</li> <li>The Arte</li> <li>Wilkie Studio</li> </ul>
CONSTRUCTION PRODUCTIVITY AWARDS	<ul> <li>Cliveden at Grange (Platinum)</li> <li>One Shenton (Gold)</li> <li>Shelford Suites (Platinum)</li> <li>The Residences at W Singapore Sentosa Cove (Platinum)</li> <li>Wilkie Studio (Platinum)</li> </ul>
DESIGN AND ENGINEERING SAFETY EXCELLENCE AWARDS	<ul><li>Cliveden at Grange</li><li>One Shenton (Merit)</li></ul>

\*Recertified under existing building category

#### ANNEX 2

### CDL BCA GREEN MARK PLATINUM AWARD PROJECTS 2012

# HAUS@SERANGOON GARDEN



Nestled within the tranquil low-rise Serangoon Garden residential enclave, HAUS@SERANGOON GARDEN is an exclusive terrace housing development with 96 units.

Conceptualised as a green sanctuary, HAUS@SERANGOON GARDEN is designed with environmental sustainability in mind and is the first landed housing estate in Singapore to receive the BCA Green Mark Platinum Award.

Each house is equipped with state-of-the art green technology for energy and water efficiency – it is the first landed housing development in Singapore to have a 1 kilowatt-peak Photovoltaic (PV) system

that helps to offset the grid electricity consumption by the refrigerator and reduces utility bills. In addition, there is a rainwater harvesting system to collect rainwater for gardening use. The project also boasts an innovative air-conditioner heat recovery system whereby the waste heat generated by switching on the air-conditioner is used to provide house owners with hot water in the bathrooms. This is an add-on innovation to the air-conditioning system which is of the highest energy efficiency 4-ticks rating provided for each house.

Approximately 4% of the total construction cost was invested into the development of the estate's green innovations which is expected to result in up to 40% energy savings for each house.

GREEN FEATURES	BENEFITS
<ul> <li>Designed for Energy Efficiency</li> <li>First landed housing estate in Singapore to be equipped with a Photovoltaic (PV) system (using solar panels to convert sunlight into electricity) installed on the roof of the houses. The solar energy generated will help to offset the consumption of grid electricity by the refrigerator</li> <li>Passive and Low Energy Architectural design and good overall layout orientation (North-South Orientation)</li> <li>Usage of cool roof and hardscape materials which reflect more sunlight</li> <li>Installation of energy efficient inverter air-conditioning (with 4 Green Ticks Energy Label) with heat recovery capability</li> <li>Innovative air-conditioner heat recovery system to convert waste heat generated by the air-conditioning unit to provide hot water in the bathrooms</li> </ul>	<ul> <li>Estimated energy savings of up to 40% savings per month for each typical terrace house, depending on their individual lifestyle and utility usage pattern</li> <li>Minimise external heat gain and to achieve maximum daylight harvesting</li> <li>Allow for energy conservation and achieving low Residential Envelope Transmittance Value (RETV)</li> <li>Reduce urban heat island effect and heat gain on façade</li> <li>Enjoy energy savings from the highest "4 ticks" energy-efficient air- conditioners</li> </ul>

<ul> <li>Designed for Water Efficiency</li> <li>First landed housing estate in Singapore to incorporate a rainwater harvesting system on a project-ready basis</li> <li>Installation of water efficient sanitary fixtures and fittings (certified under PUB's Water Efficiency Labelling Scheme) such as tap fittings and water closets</li> </ul>	<ul> <li>Minimise water wastage and increase the overall water usage efficiency of each house</li> <li>Total estimated water savings of up to 40% for each house, depending on individual consumption pattern</li> </ul>
<ul> <li>Implementation of Sustainable Construction Methodology and Good Indoor Environmental Quality</li> <li>Extensive use of sustainable materials for construction, including eco-friendly cement in place of ordinary Portland cement in concrete production, green concrete (Recycled Concrete Aggregates and Washed Copper Slag), eco- friendly materials (certified under the Singapore Green Label or Singapore Green Building Product schemes)</li> <li>30% recycled content in ceiling board, road pavements and pre-cast concrete drain and road kerbs</li> <li>Utilisation of non-chemical termite treatment system</li> <li>Extensive use of pre-cast / pre-fabricated components in construction</li> <li>Carbon footprint study conducted for project to identify ways to mitigate the environmental impact of the development</li> <li>Ample window openings to ensure good air flow and circulation and natural day-lighting</li> <li>Air-conditioner has Titanium Apatite Photocatalytic Air- Purifying Filter to absorb and decompose bacteria</li> </ul>	<ul> <li>Utilisation of materials with recycled content to minimise impact on the environment</li> <li>Reduce toxicity levels of emissions to the environment during the treatment</li> <li>Improve buildability, resource efficiency and productivity</li> <li>Improve environmental performance during construction phase</li> <li>Maximise fresh air entry to interiors and treat air-conditioned air to optimise occupants' comfort at all times</li> </ul>
<ul> <li>Other Green Features or Eco-Initiatives</li> <li>Fan points provided at living and dining areas of each house to allow owners to install their own fans</li> <li>Installation of eco-plugs to inform residents on the energy consumption of their electrical appliances</li> <li>Lush green landscaping incorporated in the surrounding public park, which is equipped with modern play equipment &amp; 3G exercise station</li> <li>Provide easy access to recycling facilities with recycling bins located around estate</li> </ul>	<ul> <li>Encourage the use of less energy intensive air cooling appliances</li> <li>Allow monitoring of energy usage and encourage reduction in energy use by occupants</li> <li>Promote recycling amongst occupants</li> </ul>

# REDEVELOPMENT OF LUCKY TOWER AT 57 GRANGE ROAD

Built with environmental sustainability in mind, the redevelopment of Lucky Tower at 57 Grange Road comprises two 24-storey apartment blocks with numerous eco-friendly features. CDL invested approximately 2% of the total construction cost into the development's numerous green innovations.

It is well-sited in the Tanglin area and enjoys accessibility to major roads and expressways, as well as linking the development to the epicurean hubs of Tanglin, Paterson, & River Valley areas, and just a little further on, the bright lights of Orchard Road.

The project is scheduled to be completed in January 2015.

GREEN FEATURES	BENEFITS
<ul> <li>Designed for Energy Efficiency</li> <li>High performance building envelope – passive low energy architectural design with low emissivity coated double glazed vision glass and insulated glazed spandrel panels</li> <li>High efficient light fittings</li> <li>High efficient air-conditioning system</li> <li>High efficient lifts</li> <li>Motion detectors for lift lobbies, toilets, changing rooms &amp; staircases</li> <li>Provision of sun pipes to maximise day lighting</li> </ul>	<ul> <li>Total estimated energy savings for entire development amounts to 1,497,334 kWh per year (an improvement of 26% as compared to the standard Singapore Industry Code)</li> <li>Total estimated reduction in CO<sub>2</sub> emission by approximately 748.67 tonnes per year</li> </ul>
<ul> <li>Designed for Water Efficiency</li> <li>Rain water harvesting system with tank holding the capacity to suit daily water requirements of 11.88m<sup>3</sup> per day</li> <li>Auto drip irrigation system with rain sensor controls &amp; timer</li> <li>Provision of drainage cells for effective retention of irrigated water for plant use</li> <li>Water efficient fittings</li> </ul>	<ul> <li>Reduce operational cost</li> <li>Total estimated water savings of 20,955m<sup>3</sup> per year</li> </ul>
<ul> <li>Environmental Sustainable Site / Project</li> <li>Development &amp; Management Practices</li> <li>Monitor and set targets to reduce energy and water consumption during construction stage</li> <li>Use of environmentally friendly materials that are SGLS certified with recycled content waterproofing, ceiling, turf cell, subsoil drainage, precast drainage, road kerb, rubberised column guard at car park, wheel stopper, etc.</li> </ul>	<ul> <li>Promote environmental conservation with the restoration of the natural habitat for the community</li> </ul>
<ul> <li>Designed for Good Indoor Environmental Quality &amp; Environmental Protection</li> <li>Provision of ductless / jet fans &amp; CO sensors for car park ventilation</li> <li>Well ventilated waste disposal area away from habitable spaces</li> </ul>	<ul> <li>Improve occupational health and comfort of the building users</li> </ul>

<ul> <li>Use of low VOC paint for all internal walls and ceilings</li> <li>Use of adhesive with low formaldehyde for wardrobe, kitchen cabinets, etc</li> <li>Use of composite wood with low formaldehyde</li> <li>Use of non-chemical termite treatment system</li> <li>Use of high frequency ballast to reduce flickering of lights</li> </ul>
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# SOUTH BEACH (COMMERCIAL & RESIDENTIAL)





South Beach is conveniently located next to the newly completed Circle Line's Esplanade MRT Station and is designed by world-renowned firm Foster + Partners. It will feature two 45-storey and 34-storey towers and four conserved blocks comprising some 49,000 square metres of lettable office space, 7,900 square metres of retail/F&B space, a 2,700-square metre City Club at the former NCO club building, 651 hotel rooms and 189 premier residential apartments.

With the adoption of environmental design and green technology for water and energy efficiency, this distinctive BCA Green Mark Platinum development is an exemplary showcase of 'green' architecture which is well-suited to Singapore's tropical climate and urban context.

South Beach is a joint venture between CDL and IOI Corporation Berhad and is expected to be completed in 2015.

GREEN FEATURES	BENEFITS
<ul> <li>Designed for Energy Efficiency</li> <li>High performance Building Envelope, clear glass double glazing unit with low emission coating and additional louvres for lower shading coefficient</li> <li>Envelope Thermal Transmittance Value (EETV)</li> </ul>	<ul> <li>The reduction of heat gain through the façade will reduce the load on the air- conditioning hence resulting in energy and cost savings within the space</li> </ul>
40W/m <sup>2</sup> • Waste heat recovery system • Energy-efficient fixtures and fittings • Provision of extensive greenery to reduce urban heat island effect	<ul> <li>For Non- Residential:</li> <li>Total estimated energy savings of 14,913,204 kWh per year</li> <li>Total estimated reduction in CO<sub>2</sub> emission by approximately 7457 tonnes per year</li> </ul>
	<ul> <li>For Residential:</li> <li>Total estimated energy savings of 2,626,767.87 kWh per year</li> <li>Estimate reduction in CO<sub>2</sub> emission by approximately 798 tonnes per year</li> </ul>

	<ul> <li>Collectively:</li> <li>Total estimated energy savings of 17,539,971.87 kWh per year for the entire development</li> <li>Total estimated reduction in CO<sub>2</sub> emission by approximately 8255 tonnes per year</li> </ul>
<ul> <li>Designed for Water Efficiency</li> <li>Rainwater harvesting off the towers and the canopy for irrigation purposes</li> <li>Water-efficient fixtures and fittings</li> <li>Recycling of condensate water</li> </ul>	<ul> <li>Total estimated water savings of 174,000 m<sup>3</sup> per year</li> </ul>
<ul> <li>Environmentally-sustainable Site / Project Development and Management Practices</li> <li>Conservation of historical buildings which will have low window to wall ratio resulting in reduction of direct sunlight</li> <li>Monitor and set targets to reduce water and energy consumption during construction phase</li> <li>Use of environmentally-friendly materials such as drywall partition, non-chemical anti-termite system etc</li> </ul>	<ul> <li>Social sustainability by retaining cultural heritage</li> <li>Reduction of waste and virgin building materials</li> <li>Prevention of solar heat gain within the building</li> <li>Promote environmental conservation with restoration of the natural habitat for the community</li> </ul>
<ul> <li>Design Innovations</li> <li>Microclimatic Canopy engineered to perform various environmental functions including creating a thermally comfortable microclimate, enhanced air movement encouraging cross ventilation, rain protection, rainwater harvesting, natural daylight and future photovoltaic cells harnessing heat energy</li> <li>A pedestrian 'green axis' which extends from the circulation spine beneath the canopy through several tiered landscaped platforms</li> <li>Provision of permanent exhibition space to educate the occupants and public on the innovative green design</li> </ul>	<ul> <li>Improve occupational health and comfort of users</li> <li>Reduce maintenance and operational costs by tapping on renewable energy sources</li> </ul>

# **CITY SQUARE MALL**



Through its host of sustainable designs combining architectural, mechanical and electrical innovations such as a highly efficient central air-conditioning plant, City Square Mall is estimated to reduce more than 6,000 tonnes of carbon dioxide emission in a year during operation. It would take approximately 160,000 trees to absorb this amount of carbon dioxide. This would undoubtedly contribute to the much needed effort to reduce global warming.

As Singapore's first Eco-Mall integrated with an urban park and many eco features, City Square Mall is designed to educate and influence the community about the importance of environmental conservation. The project was completed in 2009.

GREEN FEATURES	BENEFITS
<ul> <li>Designed for Energy Efficiency</li> <li>Sunpath analysis for effectiveness of sunshades and wall insulation</li> <li>High-performance low-emissivity double glazing to reduce heat transmission</li> <li>High-efficiency air-conditioning plant system</li> <li>Lighting zoning and alternate lighting circuits for common areas</li> <li>Motion detectors for toilets and staircases</li> <li>Motion lighting sensor for vehicles at Basement 4 carpark</li> <li>Eco green roof with solar panels and water-harvesting capabilities</li> <li>Indoor greenery and landscaping to mitigate urban heat island effects</li> <li>Lifts, escalators and travellators designed with autolighting and ventilation fans and slow-down features</li> </ul>	<ul> <li>Reduces total energy usage by approximately 39% compared to designs using standard industry codes</li> <li>Total estimated energy saving per year at more than 12 million kWh</li> <li>Total estimated reduction of more than 6,000 tonnes of CO<sub>2</sub> emission per year (approximately 160,000 trees are required to absorb this amount of CO<sub>2</sub> emission)</li> </ul>
<ul> <li>Designed for Water Efficiency</li> <li>Rainwater harvesting for plants irrigation (use of non-PUB potable water)</li> <li>"Eco-restrooms" with waterless urinals with "very good" to "excellent" water fitting under PUB's Water Efficiency Labelling Scheme</li> <li>Recycling of condensate water from Primary Airhandling Unit for cooling tower make up</li> <li>Water sub-meters to monitor water consumption and leak detection</li> </ul>	<ul> <li>Reduce operational costs</li> <li>Total estimated savings of 10 Olympic-sized swimming pools of water annually</li> </ul>

<ul> <li>Environmentally-sustainable Site / Project Development and Management Practices</li> <li>Conservation of eco-system with transplantation of existing trees</li> <li>Use of environmentally-friendly materials such as drywall partitions, non-chemical anti-termite system, recycled pre-cast concrete kerbs, drains, wheel stoppers, etc.</li> <li>Use of non-PUB potable water for general cleaning on-site</li> <li>Treatment and recycling of silt water during construction</li> <li>Environmentally-sustainable Site / Project Development and Management Practices</li> </ul>	<ul> <li>Promote environmental conservation with the restoration of the natural habitat for the community</li> <li>Save natural resources such as sand and granite</li> <li>Estimated savings of 300 m<sup>3</sup> of sand (equivalent to approximately 50 truck loads)</li> <li>Reduce usage of potable water during construction (approximately 16,800 m<sup>3</sup> or equivalent to 8 Olympic-sized swimming pools)</li> </ul>
<ul> <li>Designed for Good Indoor Environmental Quality and Environmental Protection</li> <li>Installation of sensors to monitor levels of indoor carbon dioxide and carbon monoxide</li> <li>Designed with cooling load variations that correspond to thermal comfort</li> <li>Air-purging system integrated with smoke extraction system for improvement of indoor air quality</li> </ul>	<ul> <li>Improve occupational health and comfort</li> </ul>
<ul> <li>Design Innovations</li> <li>Installation of a twin-chute pneumatic refuse collection and disposal system (for separation of general and recyclable waste)</li> <li>Rain sensors for landscape irrigation</li> <li>Non-toxic chemical water treatment for cooling towers</li> <li>Motion sensor for lighting level control for vehicles at Basement 4 carpark</li> <li>Cool breeze across Fountain Square fully powered by solar panels</li> <li>Light sensors at skylight of podium block to control electrical lighting</li> <li>"Eco-restrooms" with waterless urinals, motion sensors for lightings and indoor planting</li> <li>Electric-car ready carpark with charging stations and dedicated lots for hybrid cars</li> <li>Environmental-themed sculpture to raise public awareness on environmental conservation</li> <li>Real-time display of indoor environmental performance for shoppers</li> </ul>	<ul> <li>Odour-free and pest-free waste disposal system; twin- chutes encourage recycling amongst tenants</li> <li>Reduce maintenance costs</li> </ul>

# 7 & 9 TAMPINES GRANDE



Designed as a new generation office with ecofriendly with environmental sustainability in mind, Tampines Grande offers 300,000 square feet of quality office space, enhanced with eco-friendly features. Comprising two 8storey office blocks, the development is equipped with distinctive large floor plates and minimal columns for optimal space efficiency.

CDL invested approximately 4% of the total construction cost into the development of the complex's numerous green innovations.

Tampines Grande is located near Tampines Regional Centre, and is well-served by public transport and enjoys easy access to major expressways. The project was completed in June 2009.

GREEN FEATURES	BENEFITS
<ul> <li>Designed for Energy Efficiency</li> <li>High-performance building envelope – passive low energy architectural design with low emissivity coated double-glazed vision glass and insulated glazed spandrel panels. Twin horizontal aluminum louver fins are used for solar shading</li> <li>High-efficiency lighting</li> <li>Motion detectors for lighting control at toilets and staircases</li> <li>High-efficiency air-conditioning system</li> <li>High-efficiency lifts and escalators</li> </ul>	<ul> <li>Building envelope design reduces total energy consumption 122,000 kWh per year (an improvement of 20% as compared to the standard Singapore industry code)</li> <li>Total energy savings for entire building of more than 2.7 million kWh per year</li> <li>Total reduction in CO<sub>2</sub> emission by more than 1,400 tonnes per year</li> </ul>
<ul> <li>Designed for Water Efficiency</li> <li>Rainwater harvesting system and automatic irrigation system that are connected with timers and rainwater sensors. The collection tank holds 70m<sup>3</sup> of water – or a 7-day storage capacity</li> <li>Water-efficient fittings with NEWater used for flushing of all WCs and urinals</li> <li>Condensate water collection for cooling tower make-up</li> </ul>	<ul> <li>Reduce operational costs</li> <li>Zero potable water usage (WC and urinal flushing, irrigation and cooling tower) with water savings (potable water) of 45,000 m<sup>3</sup> per year</li> </ul>
<ul> <li>Environmentally-sustainable Site / Project</li> <li>Development and Management Practices</li> <li>Monitor and set targets to reduce water and energy consumption during construction phase</li> <li>Use of environmentally-friendly materials such as drywall partitions, non-chemical anti-termite system, recycled pre-cast concrete kerbs, drains, etc</li> </ul>	<ul> <li>Promote environmental conservation with the restoration of the natural habitat for the community</li> </ul>

<ul> <li>Designed for Good Indoor Environmental Quality and Environmental Protection</li> <li>Installation of carbon monoxide sensors in the car park and carbon dioxide sensors in offices</li> <li>Use of low VOC paints for all internal walls and ceilings</li> </ul>	<ul> <li>Improve occupational health and comfort of building's users</li> </ul>
Design Innovations	
<ul> <li>Photovoltaic panels and solar thermal panels to produce electricity from the sun – the largest photovoltaic panels and hot water solar panels</li> </ul>	<ul> <li>Reduce maintenance and operational costs by tapping on renewable energy sources</li> </ul>
installed on roofs in Singapore measuring a total of 1,910 m <sup>2</sup>	<ul> <li>Energy savings of 50,000 kWh per year</li> <li>Improve air quality by over 85%</li> </ul>
<ul> <li>Solar air-conditioning – absorption chillers to produce chilled water for air-conditioning</li> <li>Cold plasma air purifiers in AHUs for offices</li> </ul>	Reduce maintenance and operational costs
<ul> <li>Auto condenser tube cleaning and non-chemical treatment for cooling tower</li> <li>Light sensors for day lighting at office perimeter</li> <li>Heat recovery wheels and run-around heat pipes for pre-cooled AHU</li> </ul>	<ul> <li>135,500 KWh of energy harnessed from both rooftop photovoltaic panels and building integrated photovoltaic panels (BIPV) installed.</li> </ul>

# REPUBLIC PLAZA



Located in the heart of the Singapore business district, Republic Plaza is a 66-storey mixed development comprising two office towers and retail space.

Completed in 1995, this premium Grade A office building was among the first batch of buildings to receive the BCA Green Mark Gold award when the BCA Green Mark scheme was first introduced in 2005.

It has since undergone a retrofit to further enhance its energy efficiency and this is expected to result in energy savings of close to 4,000,000 kWh, which is equivalent to about 17.5% reduction in energy consumption for the building.

This retrofitting exercise has earned Republic Plaza the highest BCA Green Mark Platinum rating in 2012 to become BCA's 100<sup>th</sup> Green Mark Platinum building project.

GREEN FEATURES	BENEFITS
<ul> <li>Designed for Energy Efficiency</li> <li>Chiller plant system efficiency of 0.59kW/RT</li> <li>Carpark lighting changed to LED with motion detector to dim lights</li> <li>Motion detectors for lightings control at toilets and staircases</li> <li>Use of energy saving device for escalator</li> <li>Carpark guidance system</li> </ul>	<ul> <li>Estimated energy savings of almost 4,000,000 kWh per year</li> <li>More uniform lighting in carpark</li> <li>Save driver's time hunting for carpark lot</li> <li>Convert space to rentable area (200m<sup>2</sup>)</li> </ul>
<ul> <li>Designed for Water Efficiency</li> <li>Washroom and pantry fittings retrofitted with WELs fittings of "excellent" and "very good" ratings</li> <li>NEWater for cooling tower, sprinkler and irrigation</li> <li>Use of air handling unit condensate water recycled for cooling tower water make-up</li> </ul>	<ul> <li>Estimated water savings of 19,000 m<sup>3</sup> of potable water</li> <li>Estimated water savings of 60,000 m<sup>3</sup> (46%) from use of NEWater in place of potable water</li> </ul>
<ul> <li>Environmentally-sustainable Site / Project</li> <li>Development and Management Practices</li> <li>Set annual targets to reduce water and energy consumption and monitor monthly</li> <li>Promote recycling and environmental awareness among building tenants as part of corporate-wide programme</li> </ul>	<ul> <li>Promotes environmental conservation with the restoration of the natural habitat for the community</li> </ul>

<ul> <li>Use of environmentally-friendly materials through green procurement policies</li> </ul>	
<ul> <li>Designed for Good Indoor Environmental Quality and Environmental Protection</li> <li>Use of refrigerants with zero Ozone Depleting Potential (ODP) or Global Warming Potential (GWP) less than 100</li> <li>Use of refrigerant leak detection system to stop chiller operation in event of leaks</li> <li>Indoor air quality tested at least once in three years</li> </ul>	<ul> <li>Improve occupational health and comfort of building's users</li> </ul>
<ul> <li>Design Innovations</li> <li>Auto condenser tube cleaning for chillers</li> <li>Use of "Carela" method of cleaning domestic water tank annually</li> </ul>	<ul> <li>Reduce maintenance and operational costs by tapping on renewable energy sources</li> </ul>