MGBC
presents
an update on
GBI
INCENTIVES AND DEVELOPMENTS
by
Ar Von Kok Leong
Immed Past President MGBC

www.mgbc.org.my
MALAYSIA GREEN BUILDING CONFEDERATION

LEMBAGA AKITEK MALAYSIA
LEMBAGA JURUTERA MALAYSIA

GBI

PAM + ACEM

GREENBUILDINGINDEX SDN BHD

GBI ACCREDITATION PANEL
Launched
NRNC
RNC
NREB
Township INC, IEB

Coming soon
Malls
Healthcare
Data Centres
Hotels

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## MALAYSIA GREEN BUILDING CONFEDERATION

### CONCEPT COMPARISONS

<table>
<thead>
<tr>
<th>Description</th>
<th>LEED v 2.0 C&amp;S</th>
<th>Green Mark</th>
<th>GBI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>8 Prerequisite items</td>
<td>9 Mandatory items</td>
<td>Nil</td>
</tr>
<tr>
<td>Total points</td>
<td>61</td>
<td>140 + 20</td>
<td>100</td>
</tr>
<tr>
<td>Total Max points</td>
<td>61</td>
<td>120</td>
<td>100</td>
</tr>
<tr>
<td>Platinum</td>
<td>45 - 61</td>
<td>90 +</td>
<td>86 +</td>
</tr>
<tr>
<td>Gold</td>
<td>34 - 44</td>
<td>85 - 89 (Gold Plus)</td>
<td>76 - 85</td>
</tr>
<tr>
<td>Silver</td>
<td>28 - 33</td>
<td>75 - 84 (Gold)</td>
<td>66 - 75</td>
</tr>
<tr>
<td>Certified</td>
<td>23 - 27</td>
<td>50 - 74</td>
<td>50 - 65</td>
</tr>
<tr>
<td>Professional</td>
<td>LEED AP</td>
<td>Green Mark Manager</td>
<td>Facilitator</td>
</tr>
<tr>
<td>Validity</td>
<td>No period</td>
<td>3 years</td>
<td>3 years</td>
</tr>
</tbody>
</table>
“Building owners obtaining GBI Certificates from 24 October 2009 until 31 December 2014 be given income tax exemption equivalent to the additional capital expenditure in obtaining such Certificates” and

“Buyers purchasing buildings with GBI Certificates from developers be given stamp duty exemption on instruments of transfer of ownership.”

excerpts from PM’s Speech, 23 October 2009
MALAYSIA GREEN BUILDING CONFEDERATION

INCENTIVES FOR GOING GREEN

1. **GBI Incentives** (based on incremental cost)
   - Investment Tax Allowance (ITA)
   - Stamp Duty Waiver

2. **EE / RE Incentives** (based on total component cost)
   - Investment Tax Allowance (ITA)
   - Import Duty Waiver and Sales Tax Waiver
   (subject to ST and PTM validation)

3. **Development Incentives**
   by Local Authorities

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INCENTIVES FOR GBI BUILDINGS

Investment Tax Allowance

1) on additional capital expenditure incurred to obtain GBI certification for buildings where income is derived;

2) to companies investing in generation of energy from renewable sources and EC/EE activities

Stamp Duty Waiver for purchase of properties with GBI certification;

Import Duty and Sales Tax Waiver for equipment used to generate energy from renewable sources, and EE equipment such as high-efficiency motors.
Pre-requisites and Procedure

1. Applies to any GBI rating – Certified, Silver, Gold or Platinum.

2. GBI green cost sum to be valued by project QS and Architect – capital expenditure (capex) and is based on the list of approved GBI green cost items.
   
   The total of all capex is called Qualifying Expenditure (QE).

3. This GBI green cost sum is submitted as part of the CVA and will be checked by the GBI certifier and the approved GBI green cost sum will be listed in the final GBI certification.

4. Copy of GBI certification is given to applicant, maintained by GBIAP and also lodged with LAM.
## EG 1 : TAX EXEMPTION (RENTAL INCOME)

Assume Green Cost Sum
(Qualifying Expenditure ie capital expenditure only) = **RM 4,000,000**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rental Income</strong></td>
<td>2,000,000</td>
<td>2,200,000</td>
<td>2,400,000</td>
<td>2,600,000</td>
</tr>
<tr>
<td><strong>Operating Costs</strong></td>
<td>400,000</td>
<td>500,000</td>
<td>600,000</td>
<td>700,000</td>
</tr>
<tr>
<td><strong>Statutory Income</strong></td>
<td>1,600,000</td>
<td>1,700,000</td>
<td>1,800,000</td>
<td>1,900,000</td>
</tr>
<tr>
<td><strong>Less Green Cost Sum</strong></td>
<td><strong>1,600,000</strong></td>
<td><strong>1,700,000</strong></td>
<td><strong>700,000</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td><strong>Taxable Income</strong></td>
<td><strong>0</strong></td>
<td><strong>0</strong></td>
<td>1,100,000</td>
<td>1,900,000</td>
</tr>
<tr>
<td><strong>Tax Saved</strong></td>
<td>400,000</td>
<td>425,000</td>
<td>175,000</td>
<td><strong>0</strong></td>
</tr>
</tbody>
</table>
**EG 2 : TAX EXEMPTION (STAMP DUTY)**

Assume Green Cost Sum (Qualifying Expenditure ie capital expenditure only) = RM 10,000,000

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a</strong></td>
<td>Total Nett Saleable Area (sq m)</td>
<td>40,000</td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>Total Development Qualifying Expenditure (RM)</td>
<td>10,000,000</td>
</tr>
<tr>
<td><strong>c</strong></td>
<td>Qualifying Expenditure per sq m (RM/sq m)</td>
<td>b/a 250</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>Nett Unit Area (sq m)</td>
<td>280</td>
</tr>
<tr>
<td><strong>e</strong></td>
<td>Selling Price (RM/sq m)</td>
<td>8,000</td>
</tr>
<tr>
<td><strong>f</strong></td>
<td>Unit Selling Price (RM)</td>
<td>d*e 2,240,000</td>
</tr>
<tr>
<td><strong>g</strong></td>
<td>Less Green Cost Sum (QE) (at RM250/sq m)</td>
<td>c*d 70,000</td>
</tr>
<tr>
<td><strong>h</strong></td>
<td>Revised Unit Price which Stamp Duty is imposed</td>
<td>f-g 2,170,000</td>
</tr>
</tbody>
</table>
Examples of **PASSIVE DESIGN** features where Incentives apply:

1) Building envelope components such as wall and roof insulation and treatment,
2) Wall design additions (eg insulated cavity walls),
3) Window design features (IGUs, DGUs),
4) Rainwater harvesting,
5) Waste water recycling,
6) Light tubes, light shelves for enhanced daylighting, etc
Examples of **ACTIVE DESIGN** features where Incentives apply:

1) Air-conditioning and ventilation equipment,
2) Lighting systems and controls,
3) Internal transport & miscellaneous power,
4) RE power generation such as BIPV systems, Wind Turbines, etc
5) CO2 detectors and leak controls
### EXAMPLES OF GREEN COST ITEMS

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>GREEN COST ITEMS</th>
<th>REFERENCE BASE COST</th>
<th>DESCRIPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE1</td>
<td>Double Glazing Unit, Insulated Glazing Unit</td>
<td>Tempered Glass, Laminated Glass</td>
<td>Claimable on the difference of glass rates. Base shall be of reasonable thickness and type of glass which complies with the performance of similar window/curtain wall size.</td>
</tr>
<tr>
<td>EE1</td>
<td>Cavity Brickwall</td>
<td>115mm thk brickwall</td>
<td>Claimable on the difference of the difference of the difference.</td>
</tr>
<tr>
<td>EE1</td>
<td>Sunshading devices</td>
<td>Nil</td>
<td>100% claimable, must effectively reduce OTTV.</td>
</tr>
<tr>
<td>EE1</td>
<td>Roof and wall insulation</td>
<td>Nil</td>
<td>100% claimable, must comply with OTTV.</td>
</tr>
</tbody>
</table>

Source: GBI
## Examples of Green Cost Items

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>GREEN COST ITEMS</th>
<th>REFERENCE BASE COST</th>
<th>DESCRIPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE2</td>
<td>Daylight Sensors</td>
<td>Nil</td>
<td>100% claimable, must effectively reduce energy usage.</td>
</tr>
<tr>
<td>EQ3</td>
<td>CO2 Detectors</td>
<td>Nil</td>
<td>100% claimable.</td>
</tr>
<tr>
<td>EQ4</td>
<td>Low VOC paint</td>
<td>Emulsion paint</td>
<td>Claimable on the difference</td>
</tr>
<tr>
<td>EE1 SM12</td>
<td>Green Roof</td>
<td>Nil</td>
<td>100% claimable, must effectively reduce Roof U-value</td>
</tr>
<tr>
<td>SM4</td>
<td>Green Walls</td>
<td>Nil</td>
<td>100% claimable</td>
</tr>
<tr>
<td>EE1 SM12</td>
<td>Double Roof System (metal roof and rc flat roof)</td>
<td>RC flat roof c/w waterproofing and screeding</td>
<td>Claimable on the difference between the two roof systems</td>
</tr>
</tbody>
</table>
## EXAMPLES OF GREEN COST ITEMS

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>GREEN COST ITEMS</th>
<th>REFERENCE BASE COST</th>
<th>DESCRIPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE2</td>
<td>Grey Water Recycling</td>
<td>Nil</td>
<td>100% claimable, including plantroom.</td>
</tr>
<tr>
<td>WE4</td>
<td>Dual Flush Valve WC</td>
<td>Single Flush Valve WC</td>
<td>Claimable on the difference, but based on same brand and range</td>
</tr>
<tr>
<td>WE5</td>
<td>Water sub-meters to monitor leakage</td>
<td>Nil</td>
<td>100% claimable.</td>
</tr>
<tr>
<td>WE1 WE3</td>
<td>Rainwater harvesting</td>
<td>Nil</td>
<td>100% claimable.</td>
</tr>
<tr>
<td>MR5</td>
<td>Waste recycling bins</td>
<td>Nil</td>
<td>100% claimable.</td>
</tr>
<tr>
<td>IN1</td>
<td>Central vacuum</td>
<td>Nil</td>
<td>100% claimable.</td>
</tr>
</tbody>
</table>

Source: GBI
## Proposed Development Incentives

<table>
<thead>
<tr>
<th>GBI Rating</th>
<th>Plot Ratio Increase</th>
<th>Density Increase</th>
<th>Development Charges</th>
<th>Assessment Rates Reduction</th>
<th>Application Fee Reduction</th>
<th>Green Lane Processing</th>
<th>Penalty Rates Staggered Reduction, based on Incentives received for Devt Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>+ 1.0</td>
<td>+ 10%</td>
<td>- 100%</td>
<td>staggered reduction</td>
<td>- 100% applies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gold</td>
<td>+ 0.5</td>
<td>+ 5%</td>
<td>- 50%</td>
<td>staggered reduction</td>
<td>- 100% applies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td>+ 0.3</td>
<td>+ 3%</td>
<td>- 30%</td>
<td>- 50% applies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certified</td>
<td>+ 0.1</td>
<td>+1%</td>
<td>- 10%</td>
<td>- 50% applies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: the figures quoted are intended to illustrate that they should be staggered. Local Authorities will come up with their own figures as different Local Auth have their own local development strategies, policies and pace to adhere to.

www.mgbc.org.my
## MALAYSIA GREEN BUILDING CONFEDERATION

### COSTS OF GOING GREEN OVERALL

<table>
<thead>
<tr>
<th>GBI</th>
<th>Ave M’sian Bldg</th>
<th>Meets MS1525</th>
<th>GBI Certified</th>
<th>GBI Silver</th>
<th>GBI Gold</th>
<th>GBI Platinum</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEI kWh/m²/yr</td>
<td>250</td>
<td>200 - 220</td>
<td>150 - 180</td>
<td>120 - 150</td>
<td>100-120</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Energy Savings %</td>
<td>Base line</td>
<td>10 - 20</td>
<td>30 - 40</td>
<td>40 - 50</td>
<td>50 - 60</td>
<td>&gt; 60</td>
</tr>
<tr>
<td>Incremental constructn cost %</td>
<td>Base line</td>
<td>0 – 3%</td>
<td>1% – 5%</td>
<td>5% - 8%</td>
<td>5% - 10%</td>
<td>7% - 13%</td>
</tr>
</tbody>
</table>

[www.mgbc.org.my](http://www.mgbc.org.my)
COSTS OF GOING GREEN

- Certified: 5%
- Silver: 10%
- Gold: 15%
- Platinum: 15%

www.mgbc.org.my
1. Is NOT about squeezing all the latest Green Building Technologies into the development;
2. Involves an integrated design systems approach on energy usage, water usage, site context, etc;
3. Reduces wastes and redundancy wherever possible during and after construction;
4. Observes TBL and LCC
5. May cost more upfront, but savings through lower operating costs over the life of the building, in the order of 20-50%, through the following physical improvements:
   a. Environmentally integrated planning
   b. Site orientation
   c. Energy saving technologies
   d. On-site renewable energy technologies
   e. Natural daylight and ventilation
   f. Improved building envelope design
   g. Downsized HVAC and other equipment
ENVIRONMENTAL KUZNETS CURVE

We are here

Period of Perception

Period of Transition

“Race to the bottom” region

Environmental standard

“C/B” region

Cost/Benefit

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INCENTIVES FOR GBI BUILDINGS

1. Renewable Energy Act
   Feed-in Tariff (FiT)
2. Sustainable Energy Development Authority Act
3. Energy Efficiency and Conservation Act
To enhance the utilization of indigenous renewable energy sources* to contribute towards national electricity supply security and sustainable socio economic development.

Approved by Cabinet on 2 April 2011

*Indigenous renewable energy sources include Solar PV, Biomass, Biogas, small hydro
World Electricity Generation by Source

Coal
Oil
Gas
Hydro
Geothermal
Renewables

Source: IEA/OECD
RENEWABLE ENERGY ACT

OBJECTIVES

1) To increase RE contribution in the national power generation mix;
2) To facilitate the growth of RE industry;
3) To ensure reasonable RE generation costs;
4) To conserve the environment for future generations; and
5) To enhance awareness on the role and importance of RE.

Source: KeTTHA
### RENEWABLE ENERGY ACT

**Schedule for Solar PV**

a) RE installation with the following capacity:

<table>
<thead>
<tr>
<th>Capacity Range</th>
<th>FiT rate</th>
<th>Effective Period</th>
<th>Annual Degression</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Up to and incl 4 kW</td>
<td>RM 1.23</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
<tr>
<td>ii) 4kW to 24 kW</td>
<td>RM 1.20</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
<tr>
<td>iii) 24 kW to 72 kW</td>
<td>RM 1.18</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
<tr>
<td>iv) 72 kW to 1 MW</td>
<td>RM 1.14</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
</tbody>
</table>

Source: KeTTHA

www.mgbc.org.my
## RENEWABLE ENERGY ACT

### Schedule for Solar PV

b) RE installation having the following criteria:

<table>
<thead>
<tr>
<th>Description</th>
<th>FiT rate</th>
<th>Effective period</th>
<th>Annual degression</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Use as installation in buildings or bldg structures</td>
<td>+ RM 0.26</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
<tr>
<td>ii) Use as building materials</td>
<td>+ RM 0.25</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
<tr>
<td>iii) Use of local pv modules</td>
<td>+ RM 0.03</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
<tr>
<td>iv) Use of local inverters</td>
<td>+ RM 0.01</td>
<td>21 yrs</td>
<td>8 %</td>
</tr>
</tbody>
</table>

Source: KeTTHA
MALAYSIA GREEN BUILDING CONFEDERATION

GBI PROJECTS LISTING

As at 15 July 2011

www.mgbc.org.my
### GBI PROJECTS LISTING

<table>
<thead>
<tr>
<th></th>
<th>NRNC</th>
<th>RNC</th>
<th>NREB</th>
<th>INC</th>
<th>IEB</th>
<th>T</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered</td>
<td>120</td>
<td>73</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>9</td>
<td>212</td>
</tr>
<tr>
<td>DA approved</td>
<td>36</td>
<td>24</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>65</td>
</tr>
<tr>
<td>CVA approved</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>158</td>
<td>98</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>9</td>
<td>281</td>
</tr>
</tbody>
</table>

As at 15 May 2012

GFA = 2.44m sm
CO2 = 115k tons/yr

Source: GBI

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MALAYSIA GREEN BUILDING CONFEDERATION

GBI PROJECTS LISTING

<table>
<thead>
<tr>
<th>Month</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2011</td>
<td>158</td>
</tr>
<tr>
<td>June 2011</td>
<td>178</td>
</tr>
<tr>
<td>July 2011</td>
<td>181</td>
</tr>
<tr>
<td>October 2011</td>
<td>208</td>
</tr>
<tr>
<td>November 2011</td>
<td>216</td>
</tr>
<tr>
<td>December 2011</td>
<td>234</td>
</tr>
<tr>
<td>February 2012</td>
<td>246</td>
</tr>
<tr>
<td>March 2012</td>
<td>256</td>
</tr>
<tr>
<td>April 2012</td>
<td>272</td>
</tr>
<tr>
<td>May 2012</td>
<td>281</td>
</tr>
</tbody>
</table>

www.mgbc.org.my
Kuala Lumpur 59
Selangor 74
Penang 17
Putrajaya 6
Johor 7
Others 18

Source: GBI
BUILDINGS WITH FINAL GBI CERTIFICATION

Source: GBI
PTM GEO BUILDING
GBI rated CERTIFIED on 24 July 2009
is officially Malaysia’s first GBI Certified Building.
SURUHANJAYA TENAGA BUILDING

GBI rated PLATINUM on 27 April 2011 is Malaysia’s first GBI Platinum Building.
KEN BANGSAR
Bukit Bandaraya, Kuala Lumpur

RNC
GBI GOLD

www.mgbc.org.my
1 FIRST AVENUE
Petaling Jaya, Selangor

NRNC
GBI GOLD
BUILDINGS WITH PROVISIONAL GBI CERTIFICATION
MALAYSIA GREEN BUILDING CONFEDERATION

3 HARMONI
Kuala Lumpur

RNC

GBI CERTIFIED

www.mgbc.org.my
S11 HOUSE
Petaling Jaya, Selangor

RNC
GBI PLATINUM

www.mgbc.org.my
KRC SALES GALLERY
Kajang, Selangor

NRNC  GBI CERTIFIED
MENARA WORLDWIDE
Kuala Lumpur

NRNC

GBI CERTIFIED

www.mgbc.org.my
MALAYSIA GREEN BUILDING CONFEDERATION

TREEZ
Bukit Jalil, Kuala Lumpur

RNC
GBI SILVER

www.mgbc.org.my
MALAYSIA GREEN BUILDING CONFEDERATION

DIGI TECHNOLOGY CORP CENTRE
Kajang, Selangor

NRNC
GBI GOLD

www.mgbc.org.my
THE HORIZON
Phase 2 Blocks 1, 2, 3 and 4
Kuala Lumpur

NRNC GBI GOLD
SIME DARBY IDEA HOUSE

RNC

GBI GOLD

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THE LIGHT LINEAR
Pulau Pinang
RNC
GBI CERTIFIED

www.mgbc.org.my
THE LIGHT POINT
Pulau Pinang

RNC
GBI CERTIFIED
THE SAGE
Selangor

NRNC
GBI CERTIFIED
BANGUNAN PERDANA PUTRA
Putrajaya

NREB
GBI GOLD
MENARA BINJAI
Kuala Lumpur
NRNC
GBI CERTIFIED

www.mgbc.org.my
ELKEN DISTRIBUTION CENTRE
Selangor

NRNC
GBI SILVER

www.mgbc.org.my
HOTEL PENAGA
Pulau Pinang
NRNC GBI GOLD
MENARA FELDA
Kuala Lumpur

NRNC

GBI CERTIFIED
G TOWER
Kuala Lumpur

NRNC

GBI CERTIFIED

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THANK YOU