

Building and Construction Authority



BCA GREEN MARK

## BCA Green Mark for New Buildings – Version 4

1. Residential Buildings (RB/4.0)
2. Non-Residential Buildings (NRB/4.0)




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Technology Development Division  
Tel: 6325 5821  
Fax: 6325 4800  
Email: [tan\\_tian\\_chong@bca.gov.sg](mailto:tan_tian_chong@bca.gov.sg)

**CIRCULAR TO PROFESSIONAL INSTITUTES / ASSOCIATIONS**

**REVISED BCA GREEN MARK CRITERIA FOR NEW BUILDINGS (VERSION 4.0)**

**Objective**

1. This circular is to inform industry on the upcoming revision to the Green Mark standards and the implementation timeline.

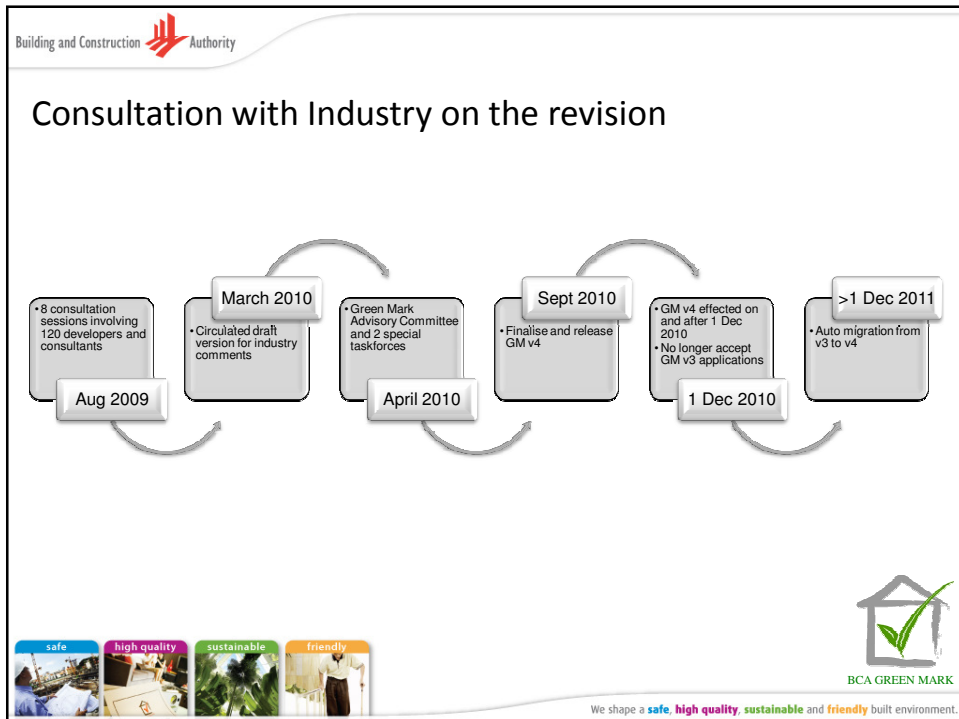
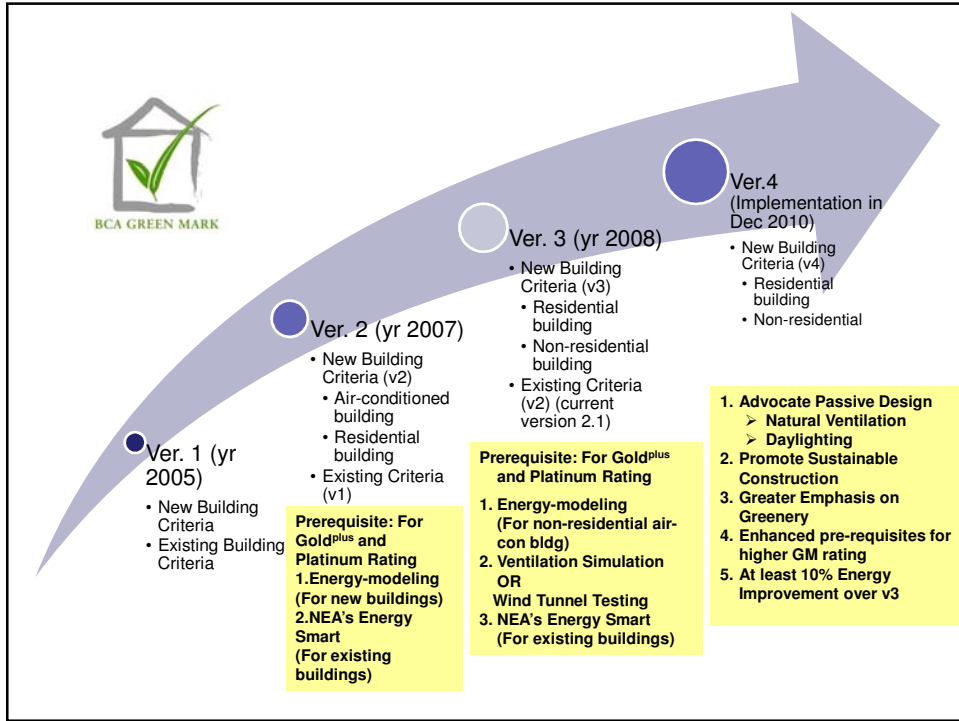
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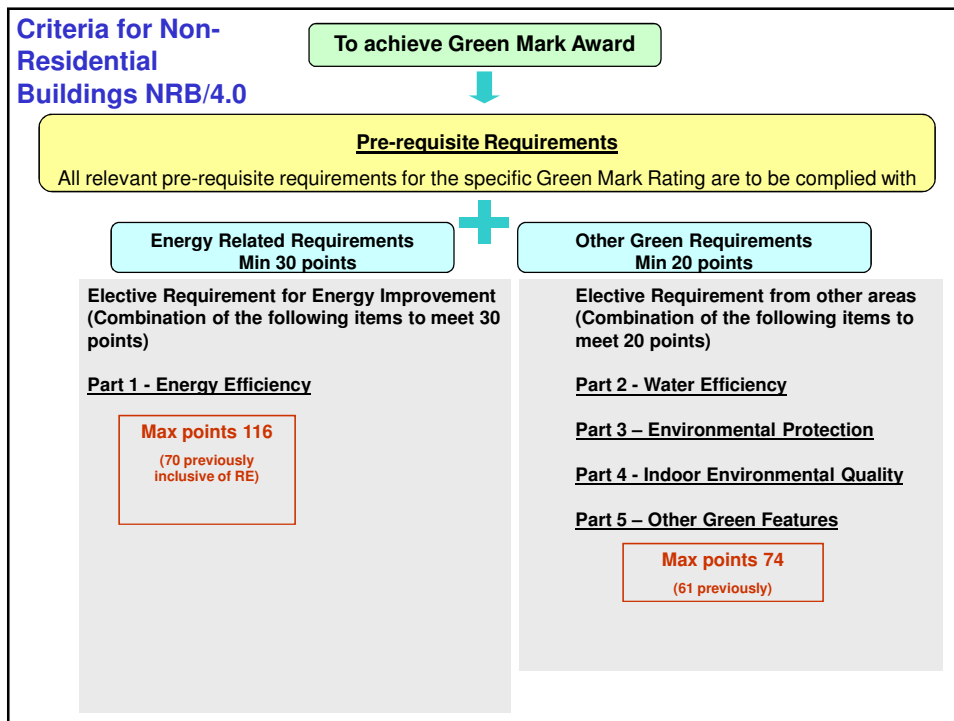
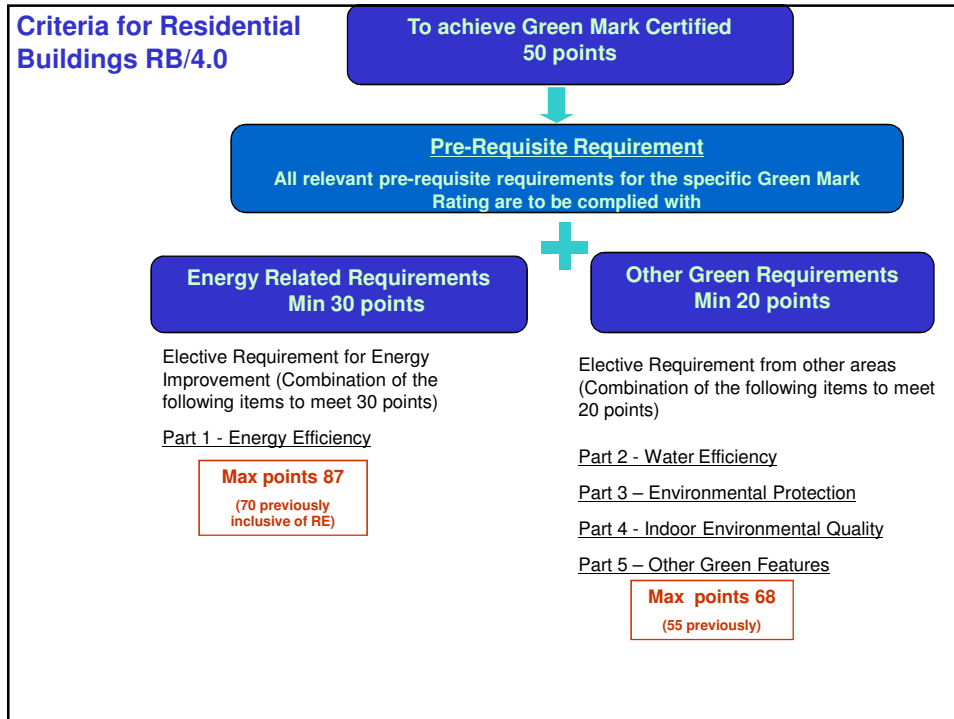
2. Over the last five years, the BCA Green Mark Scheme has been the main lever to drive the adoption of sustainable green building design and practices in the building sector. With much recognition and support from the industry, it has become the national yardstick to rate the environmental performance of building. It is now a qualifying standard for determining the eligibility and grant quantum under the various green building related incentive programmes.
3. In line with government's commitment to reduce the carbon emission and energy intensity for the building sector, BCA has embarked on a review to further enhance its framework for greater energy and resource efficiency in building developments. With the first draft proposal, BCA actively engaged the industry stakeholders (about 120 developers and professionals) in last August to seek their inputs and feedback. The



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Green Mark Score	Green Mark Rating
90 and above	Green Mark Platinum*
85 to <90	Green Mark Gold <sup>plus</sup> *
75 to <85	Green Mark Gold*
50 to <75	Green Mark Certified*

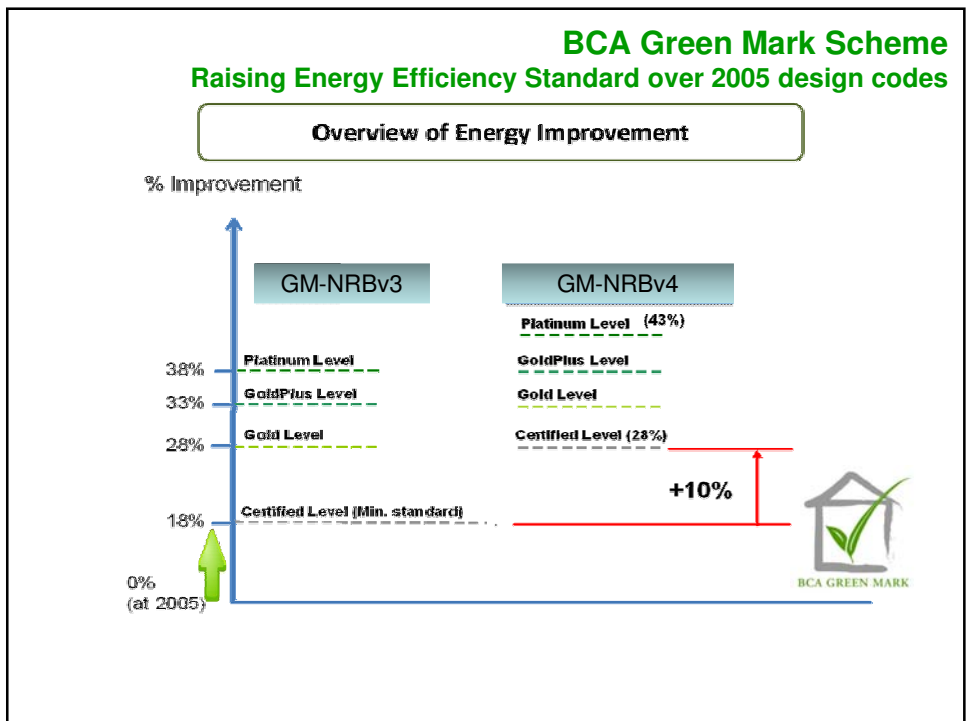
Similar to GMv3

\* Additional pre-requisite requirements

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**Green Mark Criteria  
Version 3.0**


VS


**Green Mark Criteria  
Version 4.0**


Key changes – both NRB and RB framework
Key changes – RB framework
Key changes – NRB framework

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Key changes – both NRB and RB framework


1. Maximum cap of 50 points in Energy related requirements no longer applicable.
2. Greater emphasis on passive design strategies and NV spaces.
3. New item – Use of daylighting and glare simulation analysis to encourage daylighting design.
4. New item – Vertical greening system to reduce heat gain to buildings
5. Removed/Enhancement – Point for ‘Good’ rated water efficient fittings. Higher weightages for ‘Very Good’ and ‘Excellent’ water efficient fittings.
6. New item – encourage use of drought resistant plants – minimise water consumption.
7. New item – Higher weightage for multi-tier green product rating scheme
8. New item – BCA Green and Gracious Builder scheme
9. New item – Storm water treatment
10. New item – Carbon footprint of development
11. New item – minimum sustainable scores for Gold+ and Platinum

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Building and Construction Authority 1) Key Changes – Version 3 Vs Version 4

For RB and NRB

### Multi-tier green product rating scheme

RB 3-1 Sustainable Construction	RB 3-2 Sustainable Product						
Version 3	Version 4						
<p>(a) Use of sustainable materials and products in building construction:</p> <p>(i) SGLS certified products</p> <p>(ii) Products with 30% recycled content by weight or volume.</p> <p style="text-align: center;">Up to 6 points</p>	<p>Use of environmental friendly products that are certified by <u>approved local certification body</u> and are applicable to non-structural and architectural related building components</p> <p>Applicable for non-structural and architectural related building components</p> <p>• <b>1 point</b> for high impact item</p> <p>• <b>0.5 point</b> for low impact item</p> <p>Extent of environmental friendliness of products:</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr style="background-color: #ADD8E6;"> <th style="padding: 5px;">Good</th> <th style="padding: 5px;">Very Good</th> <th style="padding: 5px;">Excellent</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">1</td> <td style="text-align: center; padding: 5px;">1.5</td> <td style="text-align: center; padding: 5px;">2</td> </tr> </tbody> </table> <p style="text-align: center;">( Up to 8 points)</p>	Good	Very Good	Excellent	1	1.5	2
Good	Very Good	Excellent					
1	1.5	2					

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Key changes – RB framework

1. Additional pre-requisite requirements for Gold+/Platinum
  - Staircases and lobbies shall be NV
  - ✓✓✓✓ air-con systems
  - Minimum SC scores
2. Enhancement and finetuning
  - Options for NV Design and aircon system
    - Option 1 – performance-based simulation (20 points)
    - Option 2 – building layout and aircon ratings (16 points)

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Key changes – NRB framework


1. Additional pre-requisite requirements for Certified/Gold/Gold+/Platinum
  - Minimum system efficiency of air-conditioning system depending on peak building loads and aircon systems.
  - Allow operating efficiency to optimise the performance.
  - Instrumentations for monitoring the watercooled chilled- water plant efficiency
  - Minimum SC scores
2. Enhancement and finetuning
  - Encourage heat balance test during building operation
  - Higher weightage for non aircon space over aircon space
  - Encourage implementing effective IAQ management plan




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## INDUSTRY BRIEFING

### GREEN MARK VERSION 4.0 FOR NEW BUILDINGS




<p><b>Briefing Programme</b></p> <ul style="list-style-type: none"> <li>• Overview of BCA Green Building Initiatives and Implementation Timeline of Green Mark Version 4.0</li> <li>• Key changes to GMv4 RB and NRB</li> <li>• Q&amp;A</li> </ul>	<p><b>Dates:</b></p> <ol style="list-style-type: none"> <li>1. 20 Sep 2010 (Mon) – 2.30 to 4.30pm</li> <li>2. 27 Sep 2010 (Mon) – 2.30 to 4.30pm</li> <li>3. 1 Oct 2010 (Fri) – 9.30 to 11.30am</li> </ol>
<b>Accredited by PEB and BOA-SIA</b>	
<b>Free!</b>	



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THANK YOU



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