

1. Name of measure

Building Control (Environmental Sustainability) Regulations 2008

2. Purpose of measure

Singapore aspires to be “a global leader in green buildings with special expertise in the tropics and sub-tropics, enabling sustainable development and quality living”. To work towards this vision and address the global concern on climate change, a holistic approach has been taken to encourage environmental friendliness in buildings and ensure that environmental quality and comfort are not compromised in both the new and existing developments in Singapore.

Amongst other initiatives, BCA has enhanced the Building Control Act to put in place legislative controls to drive the industry towards achieving an optimal level of sustainability in buildings. These legislative frameworks have been implemented progressively since 2008 to provide the relevant impetus on the desired reduction in energy consumption and carbon emissions, taking the whole life cycle of buildings into consideration.

–Mandating a Minimum Environmental Sustainability Standard for Building Developments

The Building Control (Environmental Sustainability) Regulations 2008 was introduced on 15 April 2008 to require a minimum compliance standard equivalent to the Green Mark Certified Level for the following:

- All new building works with gross floor area of 2,000 m² or more;
- Additions or extensions to existing buildings which involve increasing gross floor area of the existing buildings by 2,000 m² or more; and/or
- Building works which involve major retrofitting to existing buildings with existing gross floor area of 2,000 m² or more.

[For more details, pls refer to: http://www.bca.gov.sg/EnvSusLegislation/Environmental_Sustainability_Legislation.html]

–Setting Mandatory Higher Green Mark Standards for Government Land Sales Sites

In May 2010, to further enhance the environmental sustainability of our built environment and maximise its potential for cost-effective energy savings, mandatory higher Green Mark standards were introduced to projects developed on land sold on or after 5 May 2010 under the Government Land Sales (GLS) Programme sites in selected strategic areas.

[For more details, pls refer to: http://www.bca.gov.sg/EnvSusLegislation/Environmental_Sustainability_Legislation.html]

–Establishing National Building Energy Benchmarks Through Annual Mandatory Submission of Building Information and Energy Consumption Data

From 1 July 2013, targeted building owners are required to submit their building information and energy consumption data annually to BCA through BCA’s online submission portal, the Building Energy Submission System (BESS). The data collected through BESS will be used to close information gap through monitoring, sharing of information and demonstrating building energy performance. It will also form the basis of the industry and national building energy benchmarks. This information will be shared with building owners through simple system-generated benchmarking reports available on BESS; with analysis of building energy benchmarks detailed in the BCA Building Energy Benchmarking Report (BCA BEBR), to encourage them to take pro-active measures in improving the energy performance of their buildings in the long term.

[For more details, pls refer to: <https://www.bca.gov.sg/BESS/Default.aspx/>]

–Prescribing Mandatory Minimum Environmental Sustainability Standard for Existing Buildings Undergoing Installation or Replacement of the Building Cooling Systems

From 2 January 2014, under Part IIIB of the Building Control Act and the Building Control (Environmental Sustainability Measures for Existing Buildings) Regulations 2013, building owners are required to meet the minimum environmental sustainability standard when they install any water-cooled/ air-cooled chiller or replace any water-cooled/ air-cooled chiller with another water-cooled/ air-cooled chiller or unitary system.

[For more details, pls refer to: http://www.bca.gov.sg/EnvSusLegislation/Existing_Building_Legislation.html]

–Closing the Loop by Requiring Mandatory Periodic Energy Audit of the Building Cooling Systems for All Buildings

Also with effect from 2 January 2014, upon receipt of the Notice issued by the Commissioner of Building Control under the Act, building owners of the following two (2) categories will need to engage a Professional Mechanical Engineer (PE(Mech)) or an Energy Auditor registered with BCA (refer to BCA Energy Auditor Scheme below) to carry out an energy audit on their chiller system in accordance with the Code and submit the necessary documents to BCA. The aim of a periodic energy audit is to ensure that the building cooling system installed continues to operate as efficiently as per its initial design throughout its life cycle and continues to meet the energy efficiency standard prescribed in the Regulations and Code on Periodic Energy Audit of Building Cooling System.

The BCA Energy Auditor Scheme was set up to support the abovementioned legislative measures. It evaluates and registers competent persons as an Energy Auditor, who may be appointed to carry out the energy audit highlighted above.

3. Target sector (transport, building, manufacturing, etc.)

Building owners of commercial sector

4. Financial resources and budget allocation of measures

nil

5. Method to measure effects of measures (reduction in energy consumption and energy cost, etc.)

BCA keeps track of the total number of green buildings certified under the Green Mark scheme and total gross floor area 'greened'. To-date, there are:

- Total number of Green Buildings: More than 2,500
- Total Green GFA: More than 70 million m²
- % of total GFA: > 29%

6. Results of measures

With the above legislated measures in place, all building developments in Singapore, both new and existing, will in time achieve an optimal level of sustainability throughout their lifecycles. Through the annual building information and energy consumption data submission, industry and national building energy benchmarks will also be established and building owners can be encouraged to undertake pro-active measures to improve the energy performance of their buildings in the long term. This would contribute towards meeting the national target of greening 80% of the building stock by 2030 and Singapore will be a step closer to its vision to be “a global leader in green buildings with special expertise in the tropics and sub-tropics, enabling sustainable development and quality living”.

7.Future tasks

These legislative measures are introduced to the industry by phased approach. The measures currently cover mainly large commercial buildings with centralised building cooling systems. In the upcoming phase, the coverage of the measures will apply to medium-sized commercial buildings and other building types with centralised building cooling

8.Others

nil

9.For further details about measures, please contact:

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