

APPLICATION FOR APPROVAL OF COMPLETION OF MAJOR ENERGY-USE CHANGE AND SUBMISSION OF AS-BUILT SCORE

[Section 22FE of the Building Control Act (Cap.29) (the “Act”)]

Date:

To: Commissioner of Building Control
 Building & Construction Authority
 5 Maxwell Road #02-00
 Tower Block, MND Complex
 Singapore 069110
 Website: <http://www.bca.gov.sg>

Instructions

1. This form may be submitted electronically or manually.
 - a. All electronic submissions are to be digitally signed by the appointed Mechanical Engineer.
 - b. All manual submissions are to be signed by the appointed Mechanical Engineer.
2. This form may take 10 - 15 mins to complete.

Particulars of Application

Project Number*	Reference	<input type="text"/>												
Building Name*		<input type="text"/>												
Block Number*		<input type="text"/>												
Road Name*		<input type="text"/>												
Postal Code*		<input type="text"/>												
	ADD button	Click to add a new block (new building name, block number and postal code to be added)												
Building Sector*		<input type="text"/> Private/Public												
Building Type*		<input type="text"/> Hotel/Retail/Office/Mixed Development/Others												
Building Age*		<input type="text"/> years												
Gross Floor Area (after retrofitting works)*		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 20%;">GFA/m²</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Hotel</td> <td><input type="text"/></td> </tr> <tr> <td><input type="checkbox"/> Office</td> <td><input type="text"/></td> </tr> <tr> <td><input type="checkbox"/> Retail</td> <td><input type="text"/></td> </tr> <tr> <td><input type="checkbox"/> Others</td> <td><input type="text"/></td> </tr> <tr> <td>Total</td> <td>(auto)</td> </tr> </tbody> </table> <p>*For mixed development, fill in the areas for the respective building type.</p>		GFA/m ²	<input type="checkbox"/> Hotel	<input type="text"/>	<input type="checkbox"/> Office	<input type="text"/>	<input type="checkbox"/> Retail	<input type="text"/>	<input type="checkbox"/> Others	<input type="text"/>	Total	(auto)
	GFA/m ²													
<input type="checkbox"/> Hotel	<input type="text"/>													
<input type="checkbox"/> Office	<input type="text"/>													
<input type="checkbox"/> Retail	<input type="text"/>													
<input type="checkbox"/> Others	<input type="text"/>													
Total	(auto)													

Section I Particulars of Building Owner(s) / Management Corporation	
Name*	<input type="text"/>
NRIC*	<input type="text"/>
Company Name / MCST Plan No.	<input type="text"/>
UEN	<input type="text"/>
Designation*	<input type="text"/>
Address*	<input type="text"/>
Telephone No.*	<input type="text"/>
Handphone No.	<input type="text"/>
Fax No.	<input type="text"/>
Email Address*	<input type="text"/>
Section II Particulars of Mechanical Engineer	
Name*	<input type="text"/>
Registration No. *	<input type="text"/>
Firm Name*	<input type="text"/>
UEN	<input type="text"/>
Address*	<input type="text"/>
Telephone No. *	<input type="text"/>
Handphone No.	<input type="text"/>
Fax No.	<input type="text"/>
Email Address*	<input type="text"/>
Declaration by Mechanical Engineer	
II.1. I hereby confirm the correctness of the as-built score for the above building as provided in the declaration letter (Submission of As-built Score Calculations) to the owner as attached.	<input type="checkbox"/>
II.2. I confirm that I have been appointed under Section 22FB / Section 22FE of the Act as the Mechanical Engineer in respect of the works herein described.	<input type="checkbox"/>
II.3 I certify that I have prepared the works shown in the plans and assessed the as-built score submitted with this application and I hereby declare that that the said works and as-built score meet the minimum environmental sustainability standard applicable to the building and are in accordance with the Act and the Building Control (Environmental Sustainability Measures for Existing Buildings) Regulations 2013.	<input type="checkbox"/>

II.4. The works for major energy-use change have been completed on [REDACTED] in accordance with the design score approved by Commissioner of Building Control, subject to any departure or deviation that complies with section 22FC of the Act.	<input type="checkbox"/>
II.5. I hereby confirm that the notification of appointment/authorization form titled 'BCA-EB-NAPPE01' and attached to this application is duly signed by the relevant parties.	<input type="checkbox"/>
II.6. I hereby declare that the particulars provided in this application and the attached forms/documents are correct.	<input type="checkbox"/>
Section III Submission Details	
Air-Con area*	[REDACTED] m ²
<input type="checkbox"/> Unitary System – Split Systems / Variable Refrigerant Flow / Packaged Units	
Description of air-conditioning system	[REDACTED]
Air-Con area served by unitary system*	[REDACTED] m ²
Total Installed Cooling Capacity	[REDACTED] RT [REDACTED] kW
Total System Efficiency	[REDACTED] kW/RT [REDACTED] COP
<input type="checkbox"/> Chiller Plant System	
Chiller Plant Configuration*	<input type="checkbox"/> Air-Cooled <input type="checkbox"/> Water-Cooled [REDACTED]
Air-Con area served by chiller plant system*	[REDACTED] m ²
Daytime average cooling load*	[REDACTED] RT Night-time average cooling load* <i><only enable if hotel type checked></i> [REDACTED] RT
Daytime average cooling load per air-con area*	[REDACTED] W/m ² Night-time average cooling load per air-con area* <i><only enable if hotel type checked></i> [REDACTED] W/m ²
Daytime Chiller Plant Efficiency	Night-time Chiller Plant Efficiency <i><only enable if hotel type checked></i>
Chiller*	[REDACTED] kW/RT Chiller* [REDACTED] kW/RT
Chilled water pump*	[REDACTED] kW/RT Chilled water pump* [REDACTED] kW/RT
Condenser water pump*	[REDACTED] kW/RT Condenser water pump* [REDACTED] kW/RT
Cooling Towers*	[REDACTED] kW/RT Cooling Towers* [REDACTED] kW/RT
Total System*	[REDACTED] kW/RT Total System* [REDACTED] kW/RT
Heat Balance	
% Heat Balance within ±5% error*	[REDACTED] %

Section IV Submission Checklist	
The building is required to achieve a minimum Green Mark score of 50 points	
<input type="checkbox"/> A set of these calculations and declaration letter attached.	
The GM e-Filing No. is GM [REDACTED]-AB [REDACTED]	
The total as-built Green Mark score is [REDACTED]	
I confirm that the following documents have been submitted along with this application	<input type="checkbox"/>
a) As-built schematic drawing of air-conditioning system (water-side) is attached.	
b) As-built chiller plant room layout drawing indicating position of M&V instruments using symbol and color scheme is attached.	
c) As-built chiller part-load performance data sheet from equipment supplier is attached	
d) As-built chilled water pump selection data sheet and pump curves showing design flow and head, pump hydraulic efficiency, motor absorbed power and efficiency is attached	
e) As-built condenser water pump selection data sheet and pump curves showing design flow and head, pump hydraulic efficiency, motor absorbed power and efficiency is attached	
f) As-built cooling tower selection data sheet and location plans are attached.	
g) Instruments' calibration certificates from accredited laboratory and batch calibration certificates from manufacturers.	
h) Construction drawings of the instruments showing the details of installation.	
i) 1 week raw data of the following data points in excel format (.xls) with date and time stamp: chilled water supply temperature (°C); chilled water return temperature (°C); condenser water supply temperature (°C); condenser water return temperature (°C); chilled water flow rate (l/s); condenser water flow rate (l/s); electrical power of chiller(s), chilled water pump(s), condenser water pump(s) & cooling tower(s) (kW). The excel file should include all the chart plots specified in Annex B of the Code on Periodic Energy Audit of Building Cooling Systems.	
j) Energy Audit report (format in accordance to Annex B of "Code on Periodic Energy Audit of Building Cooling Systems")	