DESIGN REFERENCE GUIDE

EXISTING HOTEL & RESORT

GreenRE®

Version 1.0, February 2026

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1. About GreenRE

GreenRE Sdn Bhd is a wholly owned subsidiary of the Real Estate and Housing Development Association (REHDA). The GreenRE rating tool has been developed for the purposes as mentioned herein and may be subject to updating and/or modification in the future.

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2. Introduction

The GreenRE assessment scheme was established in 2013 and is a recognized green building rating system tailored for the tropical climate. GreenRE sets parameters and establishes indicators to guide the design and operation of buildings towards increased energy effectiveness and enhanced environmental performance.

The intent of this Design Reference Guide for Existing Hotel & Resort (referred to as "this Guideline") is to establish environmentally friendly practices for the planning, design, and construction of buildings, which would help to mitigate the environmental impact of built structures.

This Guideline is not intended to abridge safety, health, environmental or related requirements contained in other applicable laws, codes or policies administered by relevant authorities. Where there is a conflict between a requirement of this Guideline and such other regulations affecting the design, construction and operation of the project, the building regulations shall take precedence.

3. Revision Log

Revision	Description	Date Effective
1.0	Issued for Implementation	February 2026

4. GreenRE Assessment Stages

The GreenRE Existing Hotel & Resort certification process is as follows:

Application

- Submittal of application with relevant supporting documents for certification upon strategic inception of infrastructure project.

Pre-Assessment

- A pre-assessment can be conducted (optional) to give the project team a better understanding of the criteria and evaluation of the certification level sought. This should be performed upon selection of suitable design option to allow teams to identify and maximise opportunities at the earliest stages of the project.

Actual Assessment

- Actual assessment to be conducted once the design and documentary evidences (e.g. approved plan) are ready. After the actual assessment, our assessors will review the documents submitted.
- Assessment process includes design and documentary reviews to verify if the building project meets:
  i. The intents of the criteria
  ii. The pre-requisite requirement for GreenRE Bronze, Silver, Gold, and Platinum rating where applicable.
- Provisional Certificate will be issued upon completion of this stage.

Site Verification

- Site verification to be conducted upon project completion.
- Final Certificate will be issued upon completion of this stage.

5. GreenRE Existing Hotel & Resort Rating System

OVERVIEW:

The GreenRE Existing Hotel & Resort Rating Tools are applicable to both **High-Rise** and **Low-Rise** hotel and resort developments, defines as follows:

- **High-Rise Hotel**: A hotel building with **more than three (3) storeys** above ground level.
- **Low-Rise Hotel**: A hotel building with **three (3) storeys or fewer** above ground level.

Additionally, the Existing Hotel & Resort Rating System applies to hotel and resort that have been **in operation for over one (1) year and maintain an occupancy rate of more than 60%**, ensuring that sufficient operational data is available to support a meaningful assessment of the building's performance.

GreenRE assessment criteria consist of six (6) environmental impact categories namely:

Part 1 – Energy Efficiency: This category focuses on the approach that can be used in the Existing Data Centre and public amenities to optimise the energy efficiency of the Existing Data Centre.

Part 2 – Water Efficiency: This category focuses on the selection of fittings and strategies enabling water use efficiency during construction and building operation.

Part 3 – Sustainable Operation & Management: This category focuses on the sustainability of operation and management that would reduce the environmental impacts upon building operation.

Part 4 – Indoor Environmental Quality: This category focuses on the design strategies that would enhance the indoor environmental quality which include air quality, thermal comfort, acoustic control, and daylighting.

Part 5 – Other Green Features: This category focuses on the adoption of green practices and new technologies that are innovative and have potential environmental benefits.

Part 6 – Carbon Emission of Development: This category focuses on the use of carbon calculator to calculate the carbon emission of the development.

These environment impact categories are broadly classified under two main groupings namely (I) Energy Related Requirements and (II) Other Green Requirements.

Energy Related Requirements consist of Part 1- Energy Efficiency where credits are allocated for the various energy efficient designs, practices and features used. A minimum of 30 credits must be obtained from this group to be eligible for certification. The number of credits achievable for this group is capped at 50 credits (exclude 15 bonus credits that are obtainable under EHR 1-11 – Renewable Energy).

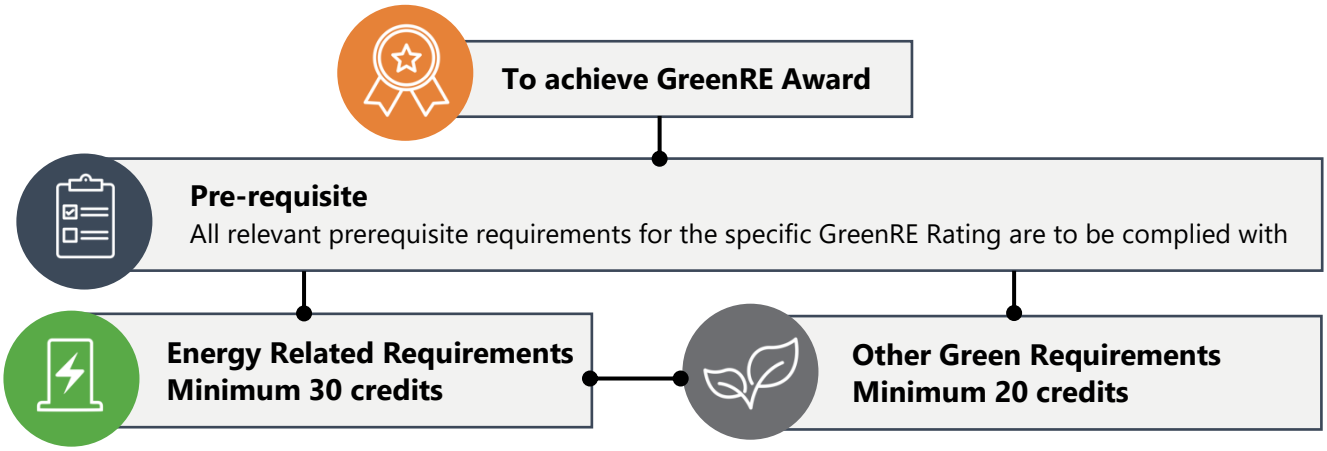
Other Green Requirements consist of Part 2 – Water Efficiency; Part 3 – Sustainable Operation & Management; Part 4 – Indoor Environmental Quality; Part 5 – Other Green Features and Part 6: Carbon Emission of Development. Credits are allocated for the water efficient features, environmentally friendly design practices, innovative green features used and carbon emission of development. A minimum of 20 credits must be obtained from this group to be eligible for certification. The number of credits achievable for this group is also capped at 50 credits.

The maximum GreenRE score achievable for a project is capped at 100 credits and this does not include 15 bonus credits that are obtainable under Energy Related Requirements if a project uses renewable energy sources. The credit scored for renewable energy provision shall not result in a double grade jump in GreenRE rating (i.e. from GreenRE Bronze or Silver to Gold or Platinum)

Under the Existing Hotel & Resort criteria, the environmental impact category Part 1 – Energy Efficiency applies to both air-conditioned and non-air-conditioned spaces. Where there is a combination of air-conditioned and non-air-conditioned spaces, the credits allocated are to be prorated in accordance with the respective floor areas.

For simplicity, credits applicable to air-conditioned areas are accounted only if the aggregate air-conditioned areas exceed 1000 m^2. Similarly, credits applicable to non-air-conditioned areas are accounted only if the aggregate non-air-conditioned areas are more than 10% of the total floor areas excluding carparks.

Framework:



Elective Requirement for Energy Improvement (Combination of the following items to meet 30 credits)

Elective Requirement for Other Areas (Combination of the following items to meet 20 credits)

PART 1 – ENERGY EFFICIENCY

EHR 1-1 Thermal Performance of Building Envelope - OTTV
EHR 1-2 Air-Conditioning System
EHR 1-3 Assisted Natural Ventilation
EHR 1-4 Daylighting
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EHR 2-3 Irrigation System and Landscaping
EHR 2-4 Water Consumption of Cooling Tower
EHR 2-5 Alternative Water Sources
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EHR 4-2 Noise Level
EHR 4-3 Air Quality & Indoor Air Pollutants
EHR 4-4 IAQ Management
EHR 4-5 Lighting & Visual Comfort

PART 5 – OTHER GREEN FEATURES

EHR 5-1 Green Features & Innovations

PART 6 – CARBON EMISSION OF DEVELOPMENT

EHR 6-1 Carbon Footprint of Development

CREDIT ALLOCATION:

Category		Credits Allocations
(I) Energy Related Requirements		
Minimum 30 credits	**Part 1: Energy Efficiency**	
	EHR 1-1 Thermal Performance of Building Envelope-OTTV	10
	EHR 1-2 Air-Conditioning System	31
	EHR 1-3 Assisted Natural Ventilation	4
	EHR 1-4 Daylighting	6
	EHR 1-5 Artificial Lighting	14
	EHR 1-6 Ventilation in Carpark	2
	EHR 1-7 Efficient Hot Water System	2
	EHR 1-8 Vertical Transportation System	2
	EHR 1-9 Design for Maintainability (DfM) - Passive and Active Design	4
	EHR 1-10 Energy Efficient Practices & Features	11
	EHR 1-11 Renewable Energy	15
	Category Score for Part 1 – Energy Efficiency	**101**
(II) Other Green Requirements		
Minimum 20 credits	**Part 2: Water Efficiency**	
	EHR 2-1 Water Efficient Fittings	8
	EHR 2-2 Water Usage and Leak Detection	3
	EHR 2-3 Irrigation System and Landscaping	3
	EHR 2-4 Water Consumption of Cooling Tower	2
	EHR 2-5 Alternative Water Sources	3
	EHR 2-6 Water Management and Improvement Plans	4
	EHR 2-7 Design for Maintainability (DfM) - Water	2
	Category Score for Part 2 – Water Efficiency	**25**
	Part 3: Sustainable Operations & Management	
	EHR 3-1 Sustainable Operation	8
	EHR 3-2 Sustainable Tourism	4
	EHR 3-3 Waste Management & Reduction	5.5
	EHR 3-4 Post Occupancy Evaluation	2
	EHR 3-5 Sustainable Products	10
	EHR 3-6 Greenery Provision	8
	EHR 3-7 Green Transport	5
	EHR 3-8 Refrigerants	1
	EHR 3-9 Design for Maintainability (DfM) - Landscape	3
	Category Score for Part 3 – Sustainable Operations & Management	**46.5**
	Part 4: Indoor Environmental Quality	
	EHR 4-1 Thermal Comfort	1
	EHR 4-2 Noise Level	1
	EHR 4-3 Air Quality and Indoor Air Pollutants	3
	EHR 4-4 IAQ Management	5
	EHR 4-5 Lighting and Visual Comfort	3
	Category Score for Part 4: Indoor Environmental Quality	**13**
	Part 5: Other Green Features	
	EHR 5-1 Green Features & Innovations	5
	Category Score for Part 5: Other Green Features	**5**
	Part 6: Carbon Emission of Development	
	EHR 6-1 Carbon Footprint of Development	2
	Category Score for Part 6: Carbon Emission of Development	**2**
	Category Score for Part 2 to Part 6 – Other Green Requirements	**91.5**
	GreenRE Existing Hotel & Resort Building Score:	**192.5**

6. GreenRE Existing Hotel Building Rating System Scoring

			
Score: 91 and above	Score: 86 to ≤ 90	Score: 76 to ≤ 85	Score: 50 to ≤ 75
GreenRE Platinum	**GreenRE Gold**	**GreenRE Silver**	**GreenRE Bronze**

7. GreenRE Existing Hotel and Resort Building Rating System Criteria

PRE-REQUISITE

Part 1 – Energy Efficiency

ENERGY EFFICIENCY

			
Minimum credits: 30 credits	Minimum credits: 35 credits	Minimum credits: 40 credits	Minimum credits: 45 credits
GreenRE Bronze	GreenRE Silver	GreenRE Gold	GreenRE Platinum

ENERGY EFFICIENCY COMPLIANCE

Projects shall demonstrate the stipulated performance through either option listed below;

Option 1: Minimum System Efficiency (Fixed Metric)

Minimum Design System Efficiency/Operating System Efficiency (DSE/OSE)

- For buildings using Water-Cooled Chilled Water Plant

GreenRE Rating	Building Cooling Load (RT)	
	< 500	≥ 500
	Efficiency (kW/RT)	
Bronze	0.85	0.75
Silver	0.80	0.70
Gold	0.75	0.68
Platinum	0.70	0.65

- For buildings using Air-Cooled Chilled Water Plant or Unitary Air-Conditioner

GreenRE Rating	Building Cooling Load (RT)	
	< 500	≥ 500
	Efficiency (kW/RT)	
Bronze	1.1	1.0
Silver	1.0	1.0
Gold	0.85	Case by case (i)
Platinum	0.78	

For building with building cooling load of more than 500RT, the use of air cooled central chilled water plant or other unitary air-conditioners are not encouraged for Gold and Platinum ratings. In general, the system efficiency of the air cooled central chilled-water plant and other unitary air-conditioners are to be comparable with the stipulated efficiency for water-cooled central chilled-water plant. Buildings that are designed with air cooled systems and for higher GreenRE rating will be assessed on a case-by-case basis.

Note: The performance of the overall air-conditioning system for the building is based on the Operating System Efficiency (OSE) of the system during normal building operating hours as defined below:

Hotel & Resort	24-hour

For Gold & Platinum, the project also needs to provide the permanent measuring instruments for monitoring of water-cooled chilled-water system and air-cooled chilled water system operating system efficiency. The installed instrumentation shall have the capability to calculate resultant plant operating system efficiency (i.e., kW/RT) within 5% of its true value and in accordance with ASHRAE Guide 22 and AHRI 550/590. Heat balance test for water-cooled chilled water system is required for verification of the accuracy of the Measurement and Verification (M&V) instrumentation.

Option 2 – Building Energy Intensity (BEI) Benchmarking

Total Building annual energy consumption over the gross floor area of the building (kWh/m^2/yr). Based on:

- Energy Calculation and measured data (Retrofit)
- Measurement – In operation

The building shall demonstrate compliance to the Building Energy Intensity (BEI) stated in the table below through 12-months measured data with a requirement of minimum occupancy of 80% for the period of measurement (projection of energy consumption necessary for lower occupancy based on prescribed BEI formula):

BEI is derived using the following equation:

BEI = [(TBEC – CPEC) / (GFA excluding carpark - GLA x FVR) x (NF/OH)

Where:
TBEC = Total building energy consumption excluding renewable energy replacement (kWh/year)
CPEC = Car Park Energy Consumption in (kWh/year)
GFA = Gross Floor Area (exclude car park area) (m^2)
GLA = Gross Lettable Area (m^2)
FVR = Floor Vacancy Rate (NLA) (m^2)
NF = Normalizing factor based on a typical weekly operating hour that is 52 Hrs/week [only for office category]
OH = Weighted weekly operating hours (hrs/week) [only for office category]

Building Type	Bronze (kWh/m^2/year)	Silver (kWh/m^2/year)	Gold (kWh/m^2/year)	Platinum (kWh/m^2/year)
Hotel & Resort (Large) (GFA > 15,000 sqm)	300	280	240	220
Hotel & Resort (Small) (GFA < 15,000 sqm)	230	210	180	160

Table 1: Building Energy Intensity (BEI) Benchmarking

Building Type	Bronze (kWh/m²/year)	Silver (kWh/m²/year)	Gold (kWh/m²/year)	Platinum (kWh/m²/year)
Hotel & Resort (Large) (GFA > 15,000 sqm)	150	140	120	135
Hotel & Resort (Small) (GFA < 15,000 sqm)	120	100	90	80

Table 2: Building Energy Intensity (BEI) Benchmarking - District Cooling System (DCS)

NATURAL VENTILATION AREA (only applicable to occupied areas, excluding circulation, plant rooms, and transit areas):

Prerequisite requirement for Platinum - At least 75% of natural ventilated areas with effective cross ventilation with North and South facing window opening.

Building Energy Intensity (BEI) calculation, proper submetering is essential. Projects must ensure that energy consumption is accurately tracked through dedicated submeters

Provision of Building User Guide and Sustainable Operation Management Guide

EHR 3-1 (a) Sustainable Operation – Operational Excellence

EHR 4-3 (c) To discourage, reduce and/or eliminate environmental tobacco smoke during operation.

Provision of the food waste management plan for kitchen and restaurant.

Provision of Green procurement policy for cleaning products, amenities, and food sourcing

Part 4 – Indoor Environmental Quality

A formal IAQ management plan must be established and implemented to ensure a healthy indoor environment for all occupants. The policy should outline procedures for maintaining acceptable indoor air quality, including ventilation, pollutant source control, and regular maintenance of HVAC systems. The policy should contain at least the following:

- **Ventilation Management:** Ensure adequate ventilation rates in accordance with recognized standards (e.g., ASHRAE 62.1 or local equivalents) to dilute indoor pollutants and maintain fresh air supply.
- **Pollutant Source Control:** Identify and minimize sources of indoor air contaminants, including volatile organic compounds (VOCs), particulate matter, and biological pollutants. This includes the selection of low-emission materials and proper storage of chemicals.
- **HVAC System Maintenance:** Establish a routine inspection and maintenance schedule for HVAC systems to ensure optimal performance, cleanliness, and efficiency. Filters should be replaced regularly, and air ducts cleaned as needed.
- **Monitoring and Response:** Implement procedures for periodic IAQ monitoring and establish a response procedure for occupant complaints or IAQ-related incidents.
- **Occupant Awareness:** Promote awareness and education among building users regarding IAQ practices, including the importance of reporting issues and maintaining cleanliness.

Part 1

Energy Efficiency

Part 1 – Energy Efficiency

EHR 1-1 THERMAL PERFORMANCE OF BUILDING ENVELOPE - OTTV	GREENRE CREDITS
Enhance the overall thermal performance of building envelope to minimize heat gain thus reducing the overall cooling load requirement. Baseline: Maximum permissible OTTV = 50 W/m^2	0.5 credits for every reduction of 1 W/m^2 in OTTV from the baseline of 50 W/m^2 Credit scored = 0.5 x (50 – OTTV) (Up to 10 credits)

EHR 1-2 AIR-CONDITIONING SYSTEM	GREENRE CREDITS
Option 1 – Fixed Metrics Applicable to Air-conditioned Building Areas (with an aggregate air-conditioned area > 1000m^2) Encourage the use of better efficiency air-conditioned equipment to minimize the energy consumption. (System efficiency in kW/ton)	
a. Water-Cooled Chilled-Water Plant: • Water-Cooled Chiller • Chilled water pump • Condenser water pump • Cooling tower	a. Water-Cooled Chilled-Water Plant Building cooling load < 500 RT 14 credits for achieving plant efficiency of 0.85 kW/ton 0.3 credit for every percentage improvement in the chiller plant efficiency better than 0.85 kW/ton Credits scored = 0.3 x (% improvement)

Baseline	Building Cooling Load	
	< 500 RT	≥ 500 RT
Prerequisite Requirements Minimum system efficiency of central chilled-water plant	0.85 kW/RT	0.75 kW/RT

OR

b. Air Cooled Chilled-Water Plant / Unitary Air Conditioners:

Air-cooled Chilled-Water plant:
- Air-Cooled Chiller
- Chilled Water Pump

Unitary Air-Conditioners:
- Variable Refrigerant Flow (VRF) System
- Water-Cooled Package Unit
- Single-Split Unit
- Multi-Split Unit

Baseline	Building Cooling Load	
	< 500 RT	≥ 500 RT
Prerequisite Requirements Minimum system efficiency of air-cooled chilled water plant or unitary conditioners	1.1 kW/RT	1.0 kW/RT

Note (1): Where there is a combination of centralised air-con system with unitary air-conditioned system, the computation for the credits scored will be pro-rated based on the air-conditioning system with aggregate capacity.

Building cooling load ≥ 500 RT

14 credits for achieving plant efficiency of 0.75 kW/ton

0.35 credit for every percentage improvement in the chiller plant efficiency better than 0.75 kW/ton

Credit scored = 0.35 x (% improvement)

(up to 20 credits)

OR

b. Air Cooled Chilled-Water Plant / Unitary Air-Conditioners:

Building cooling load < 500 RT

14 credits for achieving plant efficiency of 1.1 kW/ton

0.2 credits for every percentage improvement in the chiller plant efficiency better than 1.1 kW/ton

Credits scored = 0.2 x (% improvement)

Building cooling load ≥ 500 RT

14 credits for achieving plant efficiency of 1.0 kW/ton

0.25 credits for every percentage improvement in the chiller plant efficiency better than 1.0 kW/ton

Credits scored = 0.25 x (% improvement)

(Up to 20 credits)

c. Air Distribution system:
- Air Handling units (AHUs)
- Fan Coil Units (FCUs)

Fan System Input Power

Baseline: ASHRAE 90.1:2010 Clause 6.5.3.1 and as prescribed below;

Baseline Air Distribution System Type	Allowable Fan System Input Power	
	($kW/m^3/s$)	(W/CMH)
AHUs / FCUs ≥ 4kW (Constant Volume)	1.5	0.42
AHUs ≥ 4kW (Variable Volume)	2.1	0.58
Fan systems with nameplate motor power < 4kW	0.6	0.17

Note (2): For buildings using district cooling system, there is no need to compute the plant efficiency under Part 1-2 (a) and (b). The credits obtained will be pro-rated based on the air distribution system efficiency under Part 1-2 (c).

c. Air Distribution system:

0.15 credits for every percentage improvement in the air distribution system efficiency over the baseline

Credits scored = 0.15 x (% improvement)

(up to 6 credits)

d. Provision of permanent measuring instruments for monitoring of water-cooled chilled water plant and air-cooled chilled water plant efficiency. The installed instrumentation shall have the capability to calculate resultant plant efficiency (i.e., kW/RT) within 5% of its true value and in accordance with ASHRAE Guide 22 and AHRI 550/590. The following instrumentation and installation are also required to be complied:

- Location of measuring devices to be reviewed by competent person or engineer to ensure accuracy of measurements. Installation of sensors to be performed in accordance to manufacturer's recommendations.
- Data acquisition system to have a minimum resolution of 16 bit.
- All data logging with capability to trend at 1 minute sampling time interval.

Applicable only to buildings with provision of water-cooled chilled water plants

2 credits

• Dedicated digital power meters shall be provided for the following groups of equipment: chiller(s), chilled water pump(s), condenser water pump(s) and cooling tower(s). • Flow meters to be provided for chilled-water and condenser water loop and shall be of ultrasonic / full bore magnetic type or equivalent. • Temperature sensors are to be provided for chilled water and condenser water loop and shall have an end-to-end measurement uncertainty not exceeding ± 0.05°C over entire measurement or calibration range. All thermo-wells shall be installed in a manner that ensures that the sensors can be in direct contact with fluid flow. Provisions shall be made for each temperature measurement location to have two spare thermo-wells located at both side of the temperature sensor for verification of measurement accuracy.	
e. Verification of central water cooled chilled-water plant instrumentation: Heat Balance - substantiating test for water cooled chilled-water plant to be computed in accordance with AHRI 550/590. The operating system efficiency and heat balance to be submitted to GreenRE upon commissioning.	1 credit
f. Provision of variable speed controls for chiller plant equipment such as chilled-water pumps and cooling tower fans to ensure better part-load plant efficiency.	1 credit
g. Sensors or similar automatic control devices are used to regulate outdoor air flow rate to maintain the concentration of carbon dioxide. Indoor carbon dioxide acceptable range ≤700 ppm above outdoor concentration.	1 credit

Option 2 – BEI Benchmarking

i. Air-conditioning System

a. Projects with air conditioning system

Total building annual energy consumption over the gross floor area of the building (kWh/m^2/yr). Based on:

- Energy Calculation and measured data (Retrofit)
- Measurement – In operation

The project shall demonstrate the Building Energy Intensity (BEI) and show compliance to the table below (minimum occupancy >80% (projection of energy consumption necessary for lower occupancy based on prescribed BEI formula)):

BEI = [(TBEC – CPEC) / GFA excluding carpark]

Where:

TBEC = Total building energy consumption without the renewable energy replacement (kWh/year)

CPEC = Car Park Energy Consumption in (kWh/year)

GFA = Gross Floor Area (exclude car park area) (m^2)

14 credits for achieving BEI per table shown.

b. Water-Cooled Chilled-Water Plant:

- Water-Cooled Chiller
- Chilled water pump
- Condenser water pump
- Cooling tower

Baseline	Building Cooling Load	
	< 500 RT	≥ 500 RT
Prerequisite Requirements Minimum system efficiency of chilled-water plant	0.85 kW/RT	0.75 kW/RT

OR

b. Water-Cooled Chilled-Water Plant

Building cooling load < 500 RT

0.3 credit for every percentage improvement in the chiller plant efficiency better than 0.85 kW/ton

Credits scored = 0.3 x (%improvement)

Building cooling load ≥ 500 RT

0.35 credit for every percentage improvement in the chiller plant efficiency better than 0.75 kW/ton

Credit scored = 0.35 x % improvement)

(up to 6 credits)

OR

c. Air Cooled Chilled-Water Plant / Unitary Air-Conditioners:

Air cooled Chilled-Water Plant:
- Air-Cooled Chiller
- Chilled Water Pump

Unitary Air-Conditioners:
- Variable Refrigerant Flow (VRF) System
- Water-Cooled Package Unit
- Single-Split Unit
- Multi-Split Unit

Baseline	Building Cooling Load	
	< 500 RT	≥ 500 RT
Prerequisite Requirements Minimum system efficiency of air-cooled chilled water plant or unitary conditioners	1.1 kW/RT	1.0 kW/RT

Note (3): Where there is a combination of centralised air-conditioned system with unitary air-conditioned system, the computation for the credit scored will be pro-rated based on the air-conditioning system aggregate capacity.

c. Air Cooled Chilled-Water Plant / Unitary Air-Conditioners:

Building cooling load < 500 RT

0.2 credit for every percentage improvement in the chiller plant efficiency better than 1.1 kW/ton

Credit scored = 0.2 x (% improvement)

Building cooling load ≥ 500 RT

0.25 credit for every percentage improvement in the chiller plant efficiency better than 1.0 kW/ton

Credit scored = 0.25 x (% improvement)

(up to 6 credits)

d. Provision of permanent measuring instruments for monitoring of water-cooled chilled water plant and air-cooled chilled water plant efficiency. The installed instrumentation shall have the capability to calculate resultant plant efficiency (i.e., kW/RT) within 5% of its true value and in accordance with ASHRAE Guide 22 and AHRI 550/590. The following instrumentation and installation are also required to be complied:

- Location and installation of the measuring devices to meet the manufacturer's recommendation.
- Data acquisition system to have a minimum resolution of 16 bit.
- All data logging with capability to trend at 1 minute sampling time interval.
- Dedicated digital power meters shall be provided for the following groups of equipment: chiller(s), chilled water pump(s), condenser water pump(s) and cooling tower(s).

Applicable only to buildings with provision of water-cooled chilled water plants

2 credits

• Flow meters to be provided for chilled-water and condenser water loop and shall be of ultrasonic / full bore magnetic type or equivalent. • Temperature sensors are to be provided for chilled water and condenser water loop and shall have an end-to-end measurement uncertainty not exceeding ± 0.05°C over entire measurement or calibration range. All thermo-wells shall be installed in a manner that ensures that the sensors can be in direct contact with fluid flow. Provisions shall be made for each temperature measurement location to have two spare thermo-wells located at both side of the temperature sensor for verification of measurement accuracy.	
e. Verification of central water cooled chilled-water plant instrumentation: Heat Balance - substantiating test for water cooled chilled-water plant to be computed in accordance with AHRI 550/590. The operating system efficiency and heat balance to be submitted to GreenRE upon commissioning.	1 credit
f. Provision of variable speed controls for chiller plant equipment such as chilled-water pumps and cooling tower fans to ensure better part-load plant efficiency	1 credit
g. Sensors or similar automatic control devices are used to regulate outdoor air flow rate to maintain the concentration of carbon dioxide. Indoor carbon dioxide acceptable range ≤700 ppm above outdoor concentration.	1 credit
ii. District Cooling System a. Projects with district cooling system Total building annual energy consumption over the gross floor area of the building (kWh/m^2/yr). Based on: • Energy Calculation and measured data (Retrofit) • Measurement – In operation The project shall demonstrate the Building Energy Intensity (BEI) and show compliance to the table below (minimum occupancy >80%)	15 credits for achieving BEI per table shown.

b. Air Distribution system:
- Air Handling units (AHUs)
- Fan Coil Units (FCUs)

Fan System Input Power

Baseline: ASHRAE 90.1:2010 Clause 6.5.3.1 and as prescribed below;

Baseline Air Distribution System Type	Allowable Fan System Input Power	
	($kW/m^3/s$)	(W/CMH)
AHUs / FCUs ≥ 4kW (Constant Volume)	1.5	0.42
AHUs ≥ 4kW (Variable Volume)	2.1	0.58
Fan systems with nameplate motor power < 4kW	0.6	0.17

b. Air Distribution system:

0.15 credits for every percentage improvement in the air distribution system efficiency over the baseline

Credits scored = 0.15 x (% improvement)

(up to 6 credits)

EHR 1-3 ASSISTED NATURAL VENTILATION	GREENRE CREDITS
Encourage the use of better energy efficient assisted ventilation system to minimise energy consumption.	
a. Provision of mechanical - Use of ceiling fan as the mechanical cooling system in the guest room	2 credits
b. Natural Ventilation in Common Area	
• Lift lobbies and corridors	1 credit
• Staircases	1 credit

EHR 1-4 DAYLIGHTING	GREENRE CREDITS
Encourage effective day lighting to reduce energy use for artificial lighting.	

a. On-site measurement to verify that 50% or more of all normally occupied areas achieve adequate daylight illuminance levels as specified in MS1525:2019. Areas with illuminance levels below or above the range do not comply.

Percentage of Habitable spaces with Adequate Ambient Lighting Level	Credits Allocation
50% - 75%	1
76% - 90%	2
>90%	3

(Up to 3 credits)

b. Daylighting in the following common areas:

i.	Lift lobbies and corridors	1 credit
ii.	Staircases	1 credit
iii.	Carparks	1 credit

Note:

a. On-site measurement is necessary for occupied space and common area to prove the minimum daylight factors required.

b. For common areas, artificial lighting circuits schematic area necessary as documentary to proof design allows controllability to maximise harvested daylight.

EHR 1-5 ARTIFICIAL LIGHTING

GREENRE CREDITS

Encourage the use of better efficient lighting to minimise energy consumption from lighting usage while maintaining proper lighting level.

a. Lighting Power Budget

Baseline: Luminance level stated in MS 1525:2019

Note:

a. Lux level simulation is required to show compliance per MS1525:2019

b. The lighting circuit also should comply to the following:

- Light switches are to be placed near doorways and easily accessed; AND
- Separate switches for lights parallel to natural lighting.

0.3 credit for every percentage improvement in the lighting power budget

Credits scored = 0.3 x (% improvement)
(Including tenant lighting provision)

(Up to 12 credits)

b. Lighting Controls Encourage the use of lighting control circuits to minimize energy usage, such as provision of the following control strategies:	
i. Zoning of lighting for different usage / locations - To install at least 1 light switch with labels for switched zone ≤ 30m^2. Zones ≥ 30m^2 to be matched accordingly.	1 credit
ii. Scheduling control to switch on and/or off the lightings with some localized override control where lighting is needed beyond the scheduled period.	1 credit
• Lighting on timer control / connected to occupancy sensors.	
• Toggle switch for light extension for different zones beyond pre-set period.	

EHR 1-6 VENTILATION IN CARPARKS	GREENRE CREDITS
Encourage the use energy efficient design and control of ventilation systems on carparks. a. Carparks designed with natural ventilation. b. CO sensors are used to regulate the demand for mechanical ventilation (MV). Note (4): Where there is a combination of different ventilation mode adopted for car park design, the credits scored under this requirement will be prorated accordingly.	Naturally ventilated carparks – 2 credits Credits scored based on the mode of mechanical ventilation provided Fume extract- 1.5 credit MV with or without supply – 1 credit (Up to 2 credits)

EHR 1-7 EFFICIENT HOT WATER SYSTEM	GREENRE CREDITS
Use of innovative domestic hot water heating system:	
a. Gas water heaters or energy efficient heat pump water heaters	1 credit
b. Solar water heaters	2 credits (Up to 2 credits)

EHR 1-8 VERTICAL TRANSPORTATION SYSTEM	GREENRE CREDITS
Encourage the use of energy efficient lifts and escalators.	Extent of Coverage: All lifts and/or escalators
a. Lifts with the following energy efficient features: • AC variable voltage and variable frequency (VVVF) motor drive or equivalent. • Sleep mode features or equivalent.	1 credit
b. Escalators with energy efficient features such as motion sensors.	1 credit

EHR 1-9 DESIGN FOR MAINTAINABILITY (DfM) – PASSIVE AND ACTIVE DESIGN	GREENRE CREDITS
Aim for integrated, cost-effective adoption of good design, equipment placement, and construction strategies. • Reduce risk of corrosion and dust invasion in cooling tower • Reduce risk of fouling issue and improve condenser water quality • Reduce risk of dust and debris settlement inside the cooling tower basin • Avoid damage to the refrigerant pipe and insulation • Reduce risk of water ponding and algae growth in the AHU room • Reduce frequency of replacement for AHU filters • Reduce risk of water ingress and streaking on façade • Direct access to all protruding façade features, e.g. canopies, sunshades, niches, fins, ledges, BIPV, façade screens, etc. • Reduce risk of corrosion of exposed supporting steel structures • Reduce risk of water ponding on roofs • Reduce risk of waterproofing failure/decay on concrete roofs.	0.5 credit for every maintainability strategy implemented (Up to 4 credits)

EHR 1-10 ENERGY EFFICIENT PRACTICES & FEATURES	GREENRE CREDITS
Encourage the use of energy efficient practices and features which are innovative and have positive environmental impact	
a. Computation of energy consumption based on design load in the form of Building Energy Intensity (BEI).	1 credit
b. Energy-Consuming Devices	
• Guest room - hair dryer, TV, chiller, kettle, refrigerator, microwave, iron, etc.	0.5 credit
• Office operation & facility maintenance - Computer, laptop, printer, fax, screen, lawn mower, generator, waterjet, etc.	0.5 credit
• Kitchen and laundry equipment - Washing Machines, Drying Machines, Press Machine, Dish Wasters, Fridges, Freezers etc.	0.5 credit
• Inventory of energy-consuming devices/equipment that includes the date of purchase, estimated date of replacement, maintenance/services and energy-efficiency status.	0.5 credit
c. Use of Energy Efficient Features • Heat recovery devices • Thermal Insulation • Provision of vertical greenery systems • Kitchen hoods with supply/extract infrared fan controls • Etc.	3 credits for every 1% energy saving over the total building energy consumption per features (Up to 8 credits)

EHR 1-11 RENEWABLE ENERGY	GREENRE CREDITS
Encourage the use of renewable energy sources in buildings	5 credits for every 1% replacement of electricity (based on total electricity consumption) by renewable energy OR 3 credits for every 10% of roof area used for solar panels. OR
For buildings where solar panels are not installed, provide solar panel installation ready roof. Appropriate roof pitch, static loads, mounting system, and roof access to be considered.	1 credit Note: The credit scored for renewable energy provision shall not result in a double grade jump in GreenRE rating (i.e. from GreenRE Bronze or Silver to Gold or Platinum) (Up to 15 credits)
PART 1 – ENERGY EFFICIENCY CATEGORY SCORE:	Sum of EHR 1-1 to EHR 1-11 (Capped at 50 Credit) *Excluding credit from EHR 1-11

Part 2

Water Efficiency

Part 2 – Water Efficiency

EHR 2-1 WATER EFFICIENT FITTINGS	GREENRE CREDITS
Encourage the use of water efficient fittings that are certified under the Water Efficiency Products Labelling Scheme (WEPLS). a. Basin taps and mixers b. Flushing cistern c. Shower taps and mixers or showerheads d. Sink/bib taps and mixers e. Urinals and urinal flush valve	**Weightage Scoring Based on Water Efficiency Products Labelling Scheme (WEPLS)** Efficient* – **4 credits** Highly Efficient** – **6 credits** Most Efficient*** – **8 credits** Credits can be scored based on the number and water efficiency rating of the fitting type used. (Up to 8 credits)

EHR 2-2 WATER USAGE AND LEAK DETECTION	GREENRE CREDITS
Promote the use of sub-metering and leak detection system for better control and monitoring	
a. Digital water metering and management – sub-metering of the building's major water usage and/or rainwater system.	1 credit
b. Meters and submeters linked to the Building Management System (BMS) or other specialised software.	1 credit
c. BMS or specialised software capable for monitoring and leak detection across equipment type and functional areas and articulate live performance data and be interoperable to allow system adjustment.	1 credit

EHR 2-3 IRRIGATION SYSTEM AND LANDSCAPING	GREENRE CREDITS
Provision of suitable systems that utilise rainwater or recycled water for landscape irrigation to reduce potable water consumption.	
a. Use of non-potable water including rainwater for landscape irrigation with provision of submetering for monitoring during the operation.	1 credit
b. Use of water efficient irrigation system with rain sensor.	Extent of Coverage: At least 50% of the landscape areas are served by the system 1 credit
c. Use of drought tolerant plants that require minimal irrigation.	Extent of Coverage: At least 50% of the landscape areas 1 credit

EHR 2-4 WATER CONSUMPTION OF COOLING TOWER	GREENRE CREDITS
Reduce potable water consumption for cooling purpose.	
a. Use of cooling tower water treatment system which can achieve 6 or better cycles of concentration at acceptable water quality	1 credit
b. Use of recycled water from approved sources for cooling purpose	1 credit

EHR 2-5 ALTERNATIVE WATER SOURCES	GREENRE CREDITS
Use of suitable systems that utilize alternative water sources for non-potable uses: washing, water features, toilet flushing, etc (excluding cooling tower make up water) to reduce use of potable water. Alternative sources can include rainwater, greywater (for toilet flushing only), AHU condensate and recycled water from approved sources.	Credits awarded based on % reduction in total potable water usage of the applicable uses <table><tr><td>> 50 %</td><td>3 credits</td></tr><tr><td>≥ 10 % to 50 %</td><td>2 credits</td></tr><tr><td>< 10 %</td><td>1 credit</td></tr></table> (Up to 3 credits)

EHR 2-6 WATER MANAGEMENT AND IMPROVEMENT PLANS	GREENRE CREDITS
Targets to improve office water performance should be set. To show intent, measures, and implementation strategies of water efficiency improvement plans over the next three years. Committed water savings accrued from proposed measures should be quantified.	
a. Washing Capacity - washing machines, dryers, and dishwashers are filled to the recommended capacity for each cycle, and that the coolest effective water temperature is used.	1 credit
b. Towel and Linen Reuse Program - offer multiple-night guests the option to reuse towels and linen.	1 credit
c. Water quality testing by third party testing lab.	1 credit
d. Wastewater treated to a local standard and reuse on site.	1 credit

EHR 2-7 DESIGN FOR MAINTAINABILITY (DFM) – WATER	GREENRE CREDITS
Encourage good design for good water plumbing and piping maintainability which allow sufficient space, minimize pipe blockage risks, and provide easy access.	
• Access space for maintenance of water tank (including rainwater tank). • Access provision to sanitary pipes and design detailing for ease of maintenance. • Reduce risk of chokes in the sanitary pipe. • Prevent the lack of flexibility for maintenance and testing of sprinkler system.	0.5 credit for every maintainability strategy implemented (Up to 2 credits)
PART 2 – WATER EFFICIENCY CATEGORY SCORE	Sum of GreenRE credits obtained from EHR 2-1 to EHR 2-7

Part 3

Sustainable Operations & Management

Part 3 – Sustainable Operations & Management

EHR 3-1 SUSTAINABLE OPERATIONS	GREENRE CREDITS
a. Operational Excellence: Produce a manual detailing establishment opening, daily running and event procedures that minimize energy consumption.	1 credit
b. Sustainable Marketing: Use of recycled collaterals or incorporating sustainability values in marketing strategies.	1 credit
c. Sustainability promotional activities - committed to Earth Hour Day or World Environment Day activities in the mall, or another publicity activity of similar kind, would not include just turning off lights on earth hour day.	1 credit
d. Green procurement policy - Adoption of sustainable and environmental-friendly procurement and purchasing policy for the procurement of local food, goods, energy efficient equipment, sustainable energy, other consumables and services or controlling packaging types by preselecting aware wholesale sources of supply.	1 credit
e. Sustainable consumable materials - Selection of consumable materials that is environmentally friendly and sustainable such as the use of those materials which are recyclable/ recycled / non-disposable or readily degradable nature (e.g., Packaging, food wrappers, cups, utensils, napkins, etc.)	1 credit
f. Provision of a Building User Guide	1 credit
g. Provision of Sustainable Operation and Maintenance Guideline	1 credit

h. In-house building management team comprises one Certified GreenRE Accredited Professional (GREAP) / Green Mark AP/ MyCREST QP	1 credit
EHR 3-2 SUSTAINABLE TOURISM	**GREENRE CREDITS**
a. Sustainable Management - Demonstrate effective sustainable management. • Long-term sustainability management system that is suitable to its size and scope, addresses environmental, social, cultural, economic, quality, human rights, health, safety, risk, and crisis management issues and drives continuous improvement. • Conduct regular internal audits and third-party assessments. • Regular staff training to be aware of environment, good practices, etc. • Designate sustainability roles and responsibilities across departments.	1 credit
b. Maximize social and economic benefits to the local community and minimize negative impacts • 80% local employment and fair labor practices. • Support local businesses through procurement and partnerships. • Engage in community development initiatives (e.g. education, health, infrastructure). • Ensure accessibility and inclusivity for guests and staff of all backgrounds.	1 credit
c. Maximize benefits to cultural heritage and/or natural heritage and minimize negative impacts. • Promote and protect local cultural and natural assets, traditions, and sites. • Offer culturally respectful guest experiences and educational programs. • Avoid exploitation or misrepresentation of local cultures. • Collaborate with local artisans and cultural practitioners.	1 credit

d. Maximize benefits to the environment and minimize negative impacts. • Supports and contributes to biodiversity conservation, including through appropriate management of its own property with particular attention to natural and/or cultural protected areas and areas of high biodiversity value. • Avoid the introduction of invasive species. • Visits to natural and/or cultural sites.	1 credit
EHR 3-3 WASTE MANAGEMENT AND REDUCTION	**GREENRE CREDITS**
a. Installation of a dedicated container readily accessible by staff and guests to facilitate recycling. For restaurant, provision of recycling facilities for food waste and used frying oil.	1 credit
b. Promote and encourage waste minimization and recycling among staff and guests through various avenues including regular briefings, meetings, putting up waste minimization and recycling posters at strategic locations. Needs to set up comprehensive recycling and reuse program with proper documentation.	1 credit
c. Provide the proper storage area for the recyclable waste.	0.5 credit
d. In establishment packaging management - Giving customers/guests the options of no packaging or supplying packaging from recycled product.	1 credit
e. Provision of organic waste composting system to facilitate the reduction in volume of compostable organic waste going directly to landfill.	1 credit
f. Adoption of sustainable and environmental-friendly product in the operation and maintenance of the building. (e.g. cleaning product, detergent, etc.)	1 credit

EHR 3-4 POST OCCUPANCY EVALUATION	GREENRE CREDITS
a. Conduct post occupancy survey for guest satisfaction on energy and environmental performance.	1 credit
b. List of corrective actions taken following the post occupancy evaluation	1 credit

EHR 3-5 SUSTAINABLE PRODUCTS	GREENRE CREDITS
a. Encourage the use of products that are environmentally friendly and sustainable as follow: • Eco Label products • Wood products certified by the Forest Stewardship council (FSC) or the Malaysia Certification Council (MTCC) • Agreement of the manufacturer or suppliers for the buyback programmes within the life cycle or at the end of materials life for recycling reuse purpose	Credits scored will be based on the extent of use of environmentally friendly product. (Up to 8 credits)
b. Reuse Salvaged Materials Salvage or reuse construction materials for 2% of building materials based on the total material cost (extracted from the bill of quantities).	1 credit
c. Recycled Content Encourage the utilisation and use of recycled content material so that the total of post-consumer recycled content plus half of the pre-consumer content constitutes at least 10% based on the total material cost. *<u>Prerequisite Requirement:</u>* *Minimum score under EHR 3-5:* *GreenRE Gold ≥ 3 credits* *GreenRE Platinum ≥ 4 credits*	1 credit

Extent of use of environmentally friendly product	Weightage for Credit Allocation
Low Impact	0.5
Medium impact	1
High Impact	2

<table>
<tr><th>EHR 3-6 GREENERY PROVISION</th><th>GREENRE CREDITS</th></tr>
<tr><td>Encourage greater use of greenery and restoration of existing trees to reduce heat island effect.</td><td></td></tr>
<tr><td>a. Green Plot Ratio (GnPR) is calculated by considering the 3D volume covered by plants using the Leaf Area Index (LAI).</td><td><table><tr><th>GnPR</th><th>Credits Allocation</th></tr><tr><td>1.0 to < 2.0</td><td>1</td></tr><tr><td>2.0 to < 3.0</td><td>2</td></tr><tr><td>3.0 to < 4.0</td><td>3</td></tr><tr><td>4.0 to < 5.0</td><td>4</td></tr><tr><td>5.0 to < 6.0</td><td>5</td></tr><tr><td>≥ 6.0</td><td>6</td></tr></table>(Up to 6 credits)</td></tr>
<tr><td>b. Provision of compost bins to recycle organic waste to meet at least 30% of landscape fertilizer needs.</td><td>1 credit</td></tr>
<tr><td>c. Integration of fruit, herb, or vegetable garden/farm in the development and included as ingredients for restaurant and/or café menu.</td><td>1 credit</td></tr>
<tr><th>EHR 3-7 GREEN TRANSPORT</th><th>GREENRE CREDITS</th></tr>
<tr><td>Promote environmentally friendly transport options and facilities to reduce pollution from individual car use.</td><td></td></tr>
<tr><td>a. Good access (<800m walking distance) to public transport networks such as MRT/LRT stations or bus stops.</td><td>1 credit</td></tr>
<tr><td>b. Provision of covered walkway to facilitate connectivity and the use of public transport.</td><td>1 credit</td></tr>
<tr><td>c. Provision of infrastructure for electric charging stations to at least 10% of available parking spaces.</td><td>Extent of coverage: Minimum 1 number priority parking bays for every 100 carpark lots.
EV chargers – 1 for every 200 parking bays. (Cap at 3)
1 credit</td></tr>
</table>

d. Provision of hybrid/electric vehicle charging stations and priority parking lots within the development.	1 credit
e. Alternative/Energy efficient transport options for activities and operation (e.g. bike rental, shuttle service, buggy, e-scooter,etc) for guests and staff.	1 credit

EHR 3-8 REFRIGERANTS	**GREENRE CREDITS**
Reduce the potential damage to the ozone layer and the increase in global warming through the release of ozone depleting substances and greenhouse gases.	
a. Refrigerants with ozone depleting potential (ODP) of zero **OR** with global warming potential (GWP) of less than 100.	0.5 credit
b. Use of refrigerant leak detection system at critical areas of plant rooms containing chillers and other equipment with refrigerants.	0.5 credit

EHR 3-9 DESIGN FOR MAINTAINABILITY (DfM) - LANDSCAPE	**GREENRE CREDITS**
Ensure landscape elements are easy to maintain by using efficient systems, durable materials, and accessible designs. • Design for water tap for irrigation with maximum 15 m radius from each point. • Access for maintenance of underwater lighting systems. • Reduce risk of damage/degradation to outdoor landscape furniture • Access to all parts of vertical greenery for maintenance and replacement of perished plants both indoor and outdoor, e.g. catwalk, ladder, access corridor, etc. • Access for landscape on roofs and sky terraces. • Access to planter boxes on building edge - Provide minimally 600 mm access walkway to planter boxes for maintenance	0.5 credit for every maintainability strategy implemented (Up to 3 credits)
PART 3 – SUSTAINABLE OPERATIONS & MANAGEMENT CATEGORY SCORE:	Sum of GreenRE credits obtained from EHR 3-1 to EHR 3-9

Part 4

Indoor Environmental Quality

Part 4 – Indoor Environmental Quality

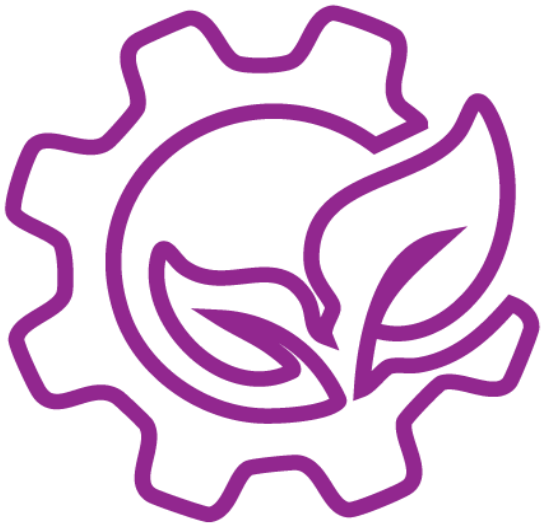
EHR 4-1 THERMAL COMFORT	GREENRE CREDITS
Air-conditioning system is designed to allow for cooling load variations due to fluctuations in ambient air temperature to ensure consistent indoor conditions for thermal comfort.	
a. Meet the minimum requirements of Section 4 through 7 of ASHRAE Standard 62.1, Ventilation for Acceptable Indoor Air Quality or any applicable local code, whichever is more stringent and requirement as follow: • Indoor temperature between 23°C to 26°C • Relative Humidity between 50% to 70%	1 credit

EHR 4-2 NOISE LEVEL	GREENRE CREDITS
a. Noise from HVAC, mechanical equipment and functional areas within the facility are built to minimise noise pollution to external environments and guests.	0.5 credit
b. An acoustic assessment or mitigation plan shall be prepared for developments located near sources of significant noise disturbance, such as major roads with heavy traffic, flyovers, highways, or high-activity tourism attractions.	0.5 credit

EHR 4-3 AIR QUALITY & INDOOR AIR POLLUTANTS	GREENRE CREDITS
Minimise airborne contaminants, mainly from inside sources to promote a healthy indoor environment.	
a. Use of low volatile organic compounds (VOC) paints certified under local/international certification body.	1 credit
b. Use adhesives certified under local/international certification body for composite wood products.	1 credit
c. To discourage, reduce and/or eliminate environmental tobacco smoke during construction/ operation.	1 credit – smoking is banned across the entirety of the site

EHR 4-4 INDOOR AIR QUALITY (IAQ) MANAGEMENT	GREENRE CREDITS
Ensure that building ventilation systems are designed and installed to provide acceptable IAQ under normal operating hours.	
a. To conduct a full IAQ audit three yearly that complies with Code of Practice on Indoor Air Quality, Department of Occupational Safety and Health, Ministry of Human Resources Malaysia (2005).	4 credits
b. Provision of filtration media and differential pressure monitoring equipment in Air Handling Units (AHUs).	1 credit

EHR 4-5 LIGHTING AND VISUAL COMFORT	GREENRE CREDITS
To provide effective lighting that enhances visibility, comfort, and safety through thoughtful design, appropriate placement, and energy-efficient systems.	
a. Lighting level to comply with MS1525:2014	1 credit
b. Lighting control strategy is developed and implemented to minimise night-time light pollution.	1 credit
c. High frequency ballasts in the fluorescent luminaries. OR Use of driver with output frequency < 200Hz and < 30% flicker for LED lighting.	1 credit
PART 4 – INDOOR ENVIRONMENTAL QUALITY CATEGORY SCORE:	Sum of GreenRE credits obtained from EHR 4-1 to EHR 4-5

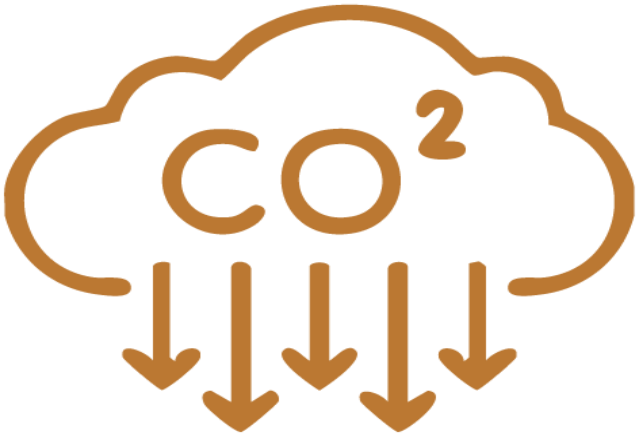


Part 5

Other Green Features

Part 5 – Other Green Features

EHR 5-1 GREEN FEATURES & INNOVATIONS	GREENRE CREDITS
To encourage the use of green features which are innovative and have positive environmental impact. Examples: • Geofencing, digital wayfinding and digital storytelling tools for hotel operation and tourism product • Knowledge Transfer - comprehensive communications document detailing embedded sustainability in the building document for the benefit of non-technical users (including marketing teams) • Educational corners / Green Corners • Treatment of kitchen exhaust with green technologies such as UVC emitters, electronic air filtration, etc. • Technologies that also incorporate noise dampeners. • Replacement of labor with technology e.g., Self-service ordering via tablets, cashless payments at table. • Innovations with demonstrable carbon or energy reducing outcomes. • Innovation encapsulating social sustainability values. • Etc.	1 credit for high impact item 0.5 credit for low impact item (Up to 5 credits)
PART 5 – OTHER GREEN FEATURES QUALITY CATEGORY SCORE	Sum of GreenRE credits obtained from EHR 5-1



Part 6

Carbon Emission of Development

Part 6 – Carbon Emission of Development

EHR 6-1 CARBON FOOTPRINT OF DEVELOPMENT	GREENRE CREDITS
a. Recognise the carbon emission based on operational carbon footprint computation of the building comprising energy [B6] and water consumption [B7].	1 credit
b. Calculation of product stage embodied carbon based on following building materials [A1-A3]: • concrete • steel • bricks • cement • steel and metal	1 credit
Part 6 – CARBON EMISSION OF DEVELOPMENT CATEGORY SCORE:	Sum of GreenRE credits obtained from EHR 6-1

GreenRE Score (Existing Hotel and Resort)

GreenRE Score (EHR) = ∑Category score [(Part 1-Energy Efficiency) +
(Part 2-Water Efficiency) +
(Part 3-Sustainable Operation & Management) +
(Part 4-Indoor Environmental Quality) +
(Part 5-Other Green Features) +
(Part 6-Carbon Emission of Development)]

Where:

Category Score for Part 1≥ 30 credits and

∑Category score for Part 2 to Part 6 ≥ 20 credits