



HKGBC
BEAM Plus
綠建環評

BEAM Plus Data Centres
綠建環評數據中心



BEAM Plus Data Centres

BEAM Plus Data Centres is a green building rating tool tailored for certifying the sustainability performance of data centres. It assesses the design and construction of new data centres, as well as the operations and maintenance of existing data centres.

綠建環評數據中心

綠建環評數據中心是一套專門用於認證數據中心的可持續性表現的綠色建築評級工具。它評估新建數據中心的设计和建設，以及既有數據中心的營運和保養。

Eligibility

The area of the data centres to be assessed should be no less than 500m², while the data halls, containing racks of IT equipment, and any related plant space should make up a significant majority of the floor area.

Depending on the stage of the building life cycle, new construction or major A&A works on data centres can be certified under BEAM Plus New Data Centres (NDC), while operations and management of data centres can be certified under BEAM Plus Existing Data Centres (EDC). Please consult a BEAM Pro for registration and assessment of your project.

Benefits of Certification

By undertaking the BEAM Plus Data Centres assessment, you can:

- minimise the environmental impacts of the construction and operations of data centres
- adopt industry best practices and innovative technology to build cost effective data centres
- demonstrate the organisation's commitment to sustainability in telecommunications infrastructure
- Support Hong Kong achieving the carbon neutrality target by 2050

認證資格

評估的數據中心面積不應少於500平方米，而包含資訊科技設備機架的數據大廳和任何相關的廠房空間應佔建築面積的大部分。

根據建築生命週期的階段，數據中心的新建工程或主要的改動及加建工程可以根據綠建環評新建數據中心 (NDC) 進行認證，而數據中心的營運和管理可以根據綠建環評既有數據中心 (EDC) 進行認證。為項目進行登記和評估前，可先徵詢綠建專才的意見。

認證的優勢

透過綠建環評數據中心評估，您可以：

- 減低數據中心建設和營運對環境的影響
- 採用行業最佳作業方式和創新技術，建設具成本效益的數據中心
- 實踐機構對電訊基礎設施可持續性的承諾
- 支持香港於2050年前實現碳中和的目標

Existing Data Centres - Assessment Criteria

既有數據中心 - 評估準則



The assessment of BEAM Plus Existing Data Centres (EDC) comprises eight performance aspects:

綠建環評既有數據中心 (EDC) 的評估包含八大主要範疇的表現：



Energy Use

能源使用 (EU) [40%]

- Energy metering and analysis
能源計量和分析
- Energy reduction and control
節能和控制
- Commissioning
調試



Management

營運管理 (MAN) [15%]

- Health, safety and environmental management
健康、安全及環境管理
- Operation and maintenance for the site, building and building services
場地、建築物及屋宇設備的營運和保養
- Environmental, social and governance (ESG) disclosure
環境、社會及管治披露



Integrated Design and

Construction Management

綜合設計與建造管理 (IDCM) [15%]

- Integrated green building design process
綠色建築綜合設計流程
- Smart and digitised management process
智能化和數碼化的管理流程



Materials and Waste

用材和廢物管理 (MW) [5%]

- Green purchasing
綠色採購
- Green disposal
綠色棄置



Water Use

用水 (WU) [10%]

- Water recycling
水的循環再用
- Water conservation
節水措施



Health and Wellbeing

健康和安舒 (HWB) [10%]

- Indoor air quality and ventilation, hygiene, thermal comfort, lighting, acoustics and noise
室內空氣質素和通風、衛生、熱舒適度、照明、聲學及噪音



Sustainable Site

可持續地塊發展 (SS) [5%]

- Green building attributes of host buildings
主體建築的綠色建築特性
- Heat island mitigation
緩和熱島效應
- Amenities for operation and maintenance
設施營運及保養



Innovations and Additions (Not applicable to the Selective Scheme)


創新 (IA) (不適用於自選評估計劃)

- Performance gains from innovative design solutions
提升表現的創新設計方案

Comprehensive Scheme 綜合評估計劃

The overall assessment rating under the Comprehensive Scheme is calculated by the weighted percentage of applicable credits gained under all eight performance aspects. There are four ratings listed as follows:

綜合評估計劃的整體評估等級由各範疇表現得分以加權百分比計算，共四個評級如下：

Pre-requisites 先決條件	Overall score 整體得分	Minimum Percentage of Applicable Credits Achieved under Energy Use and Management Aspect 「能源使用」及「營運管理」範疇的適用分數中 最少得分百分比	Rating 評級
All applicable pre-requisites in all aspects achieved 各範疇的適用先決條件 均需達標	$\geq 75\%$	70%	 PLATINUM 鉑金級 HKGBC BEAM Plus 綠建築評
	$\geq 65\%$	60%	 GOLD 金級 HKGBC BEAM Plus 綠建築評
	$\geq 55\%$	50%	 SILVER 銀級 HKGBC BEAM Plus 綠建築評
	$\geq 40\%$	40%	 BRONZE 銅級 HKGBC BEAM Plus 綠建築評

Selective Scheme 自選評估計劃

The Selective Scheme assesses the individual aspect(s) of a data centre. Energy Use and Management are mandatory aspects under the Selective Scheme. The grade under each individual aspect of the Selective Scheme is calculated by the overall percentage of credits achieved for the assessed aspect(s). All applicable pre-requisites in aspect(s) should be achieved. There are four grades listed as follows:

自選評估計劃就數據中心的個別範疇進行評估，能源使用和營運管理是自選評估計劃中的必要範疇，範疇的適用先決條件需達標。自選評估計劃每範疇的評級以其獲得的總得分百分比計算，共四個評級如下：

Overall Percentage of Credits Achieved and Respective Rating 總得分百分比和相應評估等級	70% Platinum 鉑金級	60% Gold 金級	50% Silver 銀級	40% Bronze 銅級
	 PLATINUM 鉑金級 HKGBC BEAM Plus 綠建築評	 GOLD 金級 HKGBC BEAM Plus 綠建築評	 SILVER 銀級 HKGBC BEAM Plus 綠建築評	 BRONZE 銅級 HKGBC BEAM Plus 綠建築評

A Record of Achievement with the results of all assessed aspects will be issued by BEAM Society Limited upon request, when the project completes the assessment of all seven aspects under the Selective Scheme.

當項目完成自選評估計劃下共七個範疇的評估後，建築環保評估協會可按要求發出一份載列全部範疇評級結果的「評估紀錄」。

Validity Period

The certification under BEAM Plus Existing Data Centres is valid for a period of five years.

Project owners are encouraged to renew the BEAM Plus Existing Data Centres certification every five years by commissioning and submitting a new assessment.

有效期

綠建築評既有數據中心的認證有效期為5年。

我們鼓勵業主每五年通過調試和重新提交評估，更新綠建築評既有數據中心的認證。

New Data Centres - Assessment Criteria

新建數據中心 - 評估準則



The assessment of BEAM Plus New Data Centres (NDC) comprises seven performance aspects: 綠建環評新建數據中心 (NDC) 的評估包含七大主要範疇的表現：



Energy Use 能源使用 (EU) [40%]

- Best practice on energy use
能源使用方面的最佳作業方式
- Energy reduction and control
節能和控制
- Energy efficient equipment
高效節能設備
- Renewable and alternative energy generation
可再生和替代能源發電



Integrated Design and Construction Management 綜合設計與建造管理 (IDCM) [20%]

- Integrated green building design process
綠色建築綜合設計流程
- Green construction practices
綠色施工的最佳作業方式
- Smart and digitised project management process
智能化和數碼化的項目管理流程



Sustainable Site 可持續地塊發展 (SS) [10%]

- Bioclimatic building design
生態氣候建築設計
- Biodiversity enhancement
提高生物多樣性
- Neighbourhood integration
鄰里共融
- Climate resilience and adaptability
氣候應變能力及適應力



Materials and Waste 用材和廢物管理 (MW) [10%]

- Best practice on materials usage
材料選用方面的最佳作業方式
- Green products and materials
綠色建材
- Green disposal
綠色廢物處理



Health and Wellbeing 健康和安舒 (HWB) [10%]

- Inclusive design
共融設計
- Indoor environmental quality
室內環境質素



Water Use 用水 (WU) [10%]

- Water conservation
節約用水
- Water harvesting and recycling
水的回收及重用
- Smart water metering
智能水錶



Innovations and Additions 創新 (IA)

- New and innovative technologies and techniques
創新科技及技術

The overall assessment rating is calculated by the weighted percentage of applicable credits gained under all performance aspects. There are four ratings listed as follows:

整體評估等級由各範疇表現得分以加權百分比計算，共四個評級如下：

Pre - requisites 先決條件	Overall score 整體得分	Minimum Percentage of Applicable Credits Achieved under Energy Use Aspect 「能源使用」範疇的適用分數中最少得分百分比	Rating 評級
All applicable pre - requisites in all aspects achieved 各範疇內的適用先決條件均需達標	≥ 75%	70%	PLATINUM 白金級 HKGC BEAM Plus 綠建環評
	≥ 65%	60%	GOLD 金級 HKGC BEAM Plus 綠建環評
	≥ 55%	50%	SILVER 銀級 HKGC BEAM Plus 綠建環評
	≥ 40%	40%	BRONZE 銅級 HKGC BEAM Plus 綠建環評

Remarks: "Pre-requisites Achieved" rating would be given to a project if it has met all the Pre-requisites in the BEAM Plus rating tool but has not reached the threshold scores for Bronze rating.

備註：「先決條件達標」會頒發予只達到所有先決條件而達不到銅級要求的項目。

Validity Period

The certification under BEAM Plus New Data Centres is valid for a period of five years.

Upon the expiry of a BEAM Plus New Data Centres certification, project owners are encouraged to pursue the BEAM Plus Existing Data Centres certification to keep abreast of the building's ongoing sustainability performance.

有效期

綠建環評新建數據中心的認證有效期為5年。

在綠建環評新建數據中心認證期限過後，我們鼓勵業主申請綠建環評既有數據中心認證，維持建築物的可持續營運表現。

Features of BEAM Plus Data Centres 綠建環評數據中心的特色

Specificity

BEAM Plus Data Centres is the first-ever rating tool tailored for a specific project type, i.e. data centres. The credit requirements have been reviewed to align with the practical conditions of building and operating data centres with sustainability at the core.

Best Practice on Energy Use

Data centres require high power consumption for servers and cooling. With new credit requirements formulated, the certification places emphasis on recognising best practices that enhance energy efficiency.

Emphasis on Green Management

Sustainable management practices are also a key success factor in operating data centres. Unlike the conventional Selective Scheme, Energy Use and Management are mandatory aspects under the Selective Scheme of BEAM Plus Existing Data Centres.

Testimonials 感言

The new BEAM Plus Data Centres certification sets out a broader framework, from design to construction retrofits, on energy efficiency and environment protection that helps data centres tremendously achieve sustainability.

Mr Herbert Chan

iTech Towers Data Centre Services Ltd. & Grand Ming Group Holdings Ltd.

適用性

綠建環評數據中心是首個為特定項目類型（即數據中心）制定的評級工具，其評估準則都經重新審視，符合以可持續發展為核心的數據中心建設和營運的實際條件。

能源使用方面的最佳作業方式

數據中心的伺服器 and 冷卻十分耗能，新評級準則更重視和嘉許提高能源效益的最佳作業方式。

強調綠色管理

可持續管理實務亦是營運數據中心的關鍵。有別於傳統的自選評估計劃，能源使用和營運管理都是綠建環評既有數據中心自選評估計劃中的必要評估範疇。

A milestone in the evolution of "BEAM Plus" to address specific type of buildings for the first time, which will surely lead to wider coverage and application of this powerful tool for the benefits of all.

Mr Paul Chong

The Hong Kong Federation of Electrical and Mechanical Contractors

首次對應特定建築群的「綠建環評」是持續進化的一個里程碑，將會令這個強大的評估工具得到更廣泛的認可及採用。

莊堅烈先生

香港機電工程師商聯會