

PAQS2025 Sustainability Committee

Information on Green Buildings

Reported by Building Surveyors Institute of Japan (BSIJ)

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1. Green buildings assessment system adopted

I. About Institute for Built Environment and Carbon Neutral for SDGs (IBECs) (Source: <https://www.ibecs.or.jp/english/index.html>)

In order to contribute to the achievement of the Sustainable Development Goals (SDGs), the Institute for Built Environment and Carbon Neutral for SDGs (IBECs) conducts research, technological development, and outreach activities related to housing, architecture, and urban environments, with a focus on energy conservation and carbon neutrality.

II. Activities and Achievements (excerpt)

■ BEST (Building Energy Simulation Tool) — A comprehensive simulation program for building energy performance evaluation, including building envelope, HVAC, lighting, water use, and other loads (Source: <https://www.ibecs.or.jp/english/index.html>).

■ CASBEE (Comprehensive Assessment System for Built Environment Efficiency) — A national method for evaluating and rating the environmental performance of buildings and built environments, covering planning, new construction, existing buildings, and renovation (Source: <https://www.ibec.or.jp/CASBEE/english/>).

■ J-CAT (Japan Carbon Assessment Tool for Building Lifecycle) — Software and guidelines developed by the Zero Carbon Building Promotion Committee to calculate greenhouse gas emissions over the entire building lifecycle. First trial version released in May 2024, with ongoing updates for broader adoption in 2025 (Source: https://www.ibec.or.jp/zero-carbon_building/).

III. Green Building Japan (GBJ) — A national forum promoting sustainable building environments, supporting global certification systems such as LEED, WELL, SITES, and GRESB, with active translation, technical equivalence proposals, and public awareness activities (Source: https://www.gbj.or.jp/leed/about_leed/).

2. Statutory requirements on the following elements of green buildings

In principle, buildings with a total floor area exceeding 300 m² are subject to environmental performance assessment (Source: https://www.ibec.or.jp/CASBEE/local_cas.htm). Some

local governments impose stricter reporting thresholds (e.g., 2000 m²). High-ranking CASBEE evaluations (e.g., S rank) may allow up to 250% floor area ratio relaxation.

3. Government incentives for providing new green buildings and existing green buildings

The Ministry of Economy, Trade and Industry (METI) aims for carbon neutrality by 2050 (Source: <https://www.meti.go.jp/press/2021/08/20210823001/20210823001.html>). By 2030, new buildings must meet ZEH/ZEB standards, with 60% of new detached houses equipped with photovoltaic systems. By 2025, compliance with energy conservation standards will be mandatory for all new construction.

4. Updated developments of green buildings

The Institute for the Promotion of Housing and Building SDGs (IBECs) continues to advance the Zero Carbon Building (LCCO₂ Net Zero) initiative, developing embodied carbon calculation methods, integrating BIM for digital transformation, and expanding collaboration among industry, government, and academia (Source: https://www.ibec.or.jp/zero-carbon_building/).

In 2025, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) formulated a Basic Concept within its deliberations on a system to promote Life Cycle Carbon Assessment (LCA) for buildings. The plan aims to implement a nationwide framework by FY2028 to encourage mandatory or strongly promoted building LCA practices, aligning with international decarbonization standards (Source: <https://www.mlit.go.jp>).

5. Useful links relating to green buildings

(IBECs) <https://www.ibecs.or.jp/english/index.html>

(CASBEE) <https://www.ibec.or.jp/CASBEE/english/>

(Green Building Japan about LEED) https://www.gbj.or.jp/leed/about_leed/

(LEED Number of certified registrations) <https://www.gbj.or.jp/leed-well-202307/>

(Zero Carbon Building Promotion Conference) https://www.ibec.or.jp/zero-carbon_building/

(MLIT Building LCA Initiative) <https://www.mlit.go.jp>