PAQS2023 Sustainability Committee

Information on Green Buildings
Reported by Building Surveyors Institute of Japan (BSIJ)

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1. Green buildings assessment system adopted

Comprehensive Assessment System for Built Environment Efficiency (CASBEE) is a method for evaluating and rating the environmental performance of buildings and the built environment. CASBEE was developed by a research committee established in 2001 through the collaboration of academia, industry and national and local governments, which established the Japan Sustainable Building Consortium (JSBC) under the auspice of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

CASBEE has been designed to both enhance the quality of people's lives and to reduce the life-cycle resource use and environmental loads associated with the built environment, from a single home to a whole city. Consequently, various CASBEE schemes are now deployed all over Japan and supported by national and local governments. The CASBEE assessment tools were developed on the basis of the following three principles:

[1] Comprehensive assessment throughout the life cycle of the building
[2] Assessment of the Built Environment Quality and Built Environment Load
[3] Assessment based on the newly developed Built Environment Efficiency (BEE) indicator

CASBEE for the life cycle of buildings, and is utilized at each stage of the design process.

CASBEE - Planning
CASBEE - New Construction
CASBEE - Existing
CASBEE – Renovation

Number of CASBEE certifications: Provisional results for FY2021 (as of March 2022)
CASBEE building assessment certification: 53
CASBEE certification for detached houses: 7
CASBEE real estate evaluation certification 167
CASBEE Wellness Office Evaluation Certification: 18

LEED certification is also in progress. Since 2018, over 400-500 certifications have been identified. CASBEE and DBJ account for over 90% of the total number of acquisitions, while LEED is gradually increasing

2. Statutory requirements on the following elements of green buildings

In principle, the subject building is total floor area is more 300 m2.
Some local governments require notification when building over a certain size, e.g., 2000 m2 or mor
For example, if a city achieves an S rank in the CASBEE evaluation, it will be able to receive up to 250% of the floor area ratio relaxation

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

The Ministry of Economy, Trade and Industry (METI) has compiled a list of measures for homes and buildings to achieve carbon neutrality by 2050.

〈**The goal of housing and buildings**〉

2050: The energy-saving performance of the ZEH/ZEB standard is secured on average in the stock, and the introduction of renewable energy such as photovoltaic power generation equipment becomes common in houses and buildings where the introduction is reasonable.

2030: Energy-saving performance at the level of ZEH/ZEB standard is secured for newly constructed houses/buildings, and 60% of newly constructed detached houses are equipped with photovoltaic power generation facilities.

〈**How to proceed with energy conservation measures,**〉

Mandatory compliance with energy conservation standards,
including for residences, by 2025

Raise energy efficiency standards to the level of ZEH and ZEB standards and make compliance mandatory by 2030 at the latest.

Promote the installation of photovoltaic power generation equipment by considering all possible means, including the future obligatory installation of such equipment as an option.

4. Updated developments of green buildings

The Institute for the Promotion of Housing and Building SDGs (IBECs) established the "Zero Carbon Building (LCCO2 Net Zero) Promotion Council" to develop evaluation methods and promote the spread of buildings that comprehensively reduce LCCO2 to virtually zero ("zero carbon buildings") through collaboration among industry, government and academia.

Contribution to DX, including the use of BIM. In order to secure high quality building stock that can be used by the international community and the next generation, an evaluation method for embodied carbon should be developed as soon as possible, while also taking into account the contribution to DX such as the use of BIM.

In addition, the objective is to promote and disseminate so-called "zero carbon buildings," buildings that comprehensively reduce LCCO2 to virtually zero, including energy conservation and energy creation during use.
The objective is to promote and disseminate so-called "Zero Carbon Buildings (LCCO2).

The project is funded by a subsidy from the Ministry of Land, Infrastructure, Transport and Tourism's "Environmental Stock Utilization Promotion Project.

5. Useful links relating to green buildings

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

(Number of CASBEE certifications: Provisional results for FY2021 (as of March 2022)
https://kansa.bvjc.com/column/2022/220419.html

(Legal requirements for CASBEE)
https://www.ibec.or.jp/CASBEE/local_cas.htm

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

(The Ministry of Economy, Trade and Industry (METI) compiled)
https://www.meti.go.jp/press/2021/08/20210823001/20210823001.html

(Zero Carbon Building (LCCO2 Net Zero) Promotion Conference)
https://www.ibec.or.jp/zero-carbon_building/

https://www.ibec.or.jp/zero-carbon_building/files/document1-2.pdf