

NEW DEVELOPMENT OF CHINA'S NATIONAL EVALUATION STANDARD FOR GREEN BUILDING (ESGB-2014): A COMPARISON OF ESGB 2014 TO ESGB 2006

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Overview

Green building is an important embodiment of sustainable development strategy, and evaluation system is a significant tool to guide the construction and operation of green building. Since 1990s, many countries have developed a number of green building assessment tools, such as LEED in the USA, BREEAM in the UK, CASBEE in Japan and SBTool, etc. In 2006, China published the first National Evaluation Standard for Green Building (ESGB), which soon became the most widely spread evaluation system in the country. With the fast growth of urbanization, ESGB 2006 version no longer meets the current needs and requires an update. Based on the implementation outcomes of ESGB 2006 and expert opinions, the Ministry of Housing and Urban-rural Development published a new version of ESGB in 2014 (ESGB 2014).

Methods

This research reviews the previous cases of buildings accredited with ESGB 2006 and collects the facts and data to explain the implementation results and identifies its weakness of the ESGB 2006. A comparative analysis of the ESGB 2014 with ESGB 2006 is based on an in-depth overview of both ESGB 2014 and ESGB 2006. The comparison results shows the improvement of the current ESGB 2014 in details, i.e., evaluated object, stage partition, weighted value, structure, indicators, etc.

A case study is followed by choosing one building project to evaluate and calculate the green building accreditation according to both ESGB 2014 and ESGB 2006, and demonstrate the differences and development of ESGB 2014.

Results

The 2014 version is more than a continuation of the former version. It adds a new category – “Construction Management” to cover the life cycle, and adjusts several credits more clearly. In the 2006 version there's no quantitative credits, the evaluation results of credits are ‘qualified’ or ‘unqualified’. The improvement of ESGB 2014 establishes a multi-level analysis model, and adopts AHP & Delphi methods to give weights to the categories and selected credits. It also introduces several technique rules to guide the evaluation. The improvement of ESGB 2014 gives a comprehensive reflection of the direction and development of green building in China.

Conclusions

The comparison results will show the differences and effectiveness of the ESGB 2014, in comparison to ESGB 2006, and demonstrate the development trend of ESGB in China. For example, stakeholders involvement, integrated design process, contents extension, etc.

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