

# The Applications of Green Building Rating System in Property Management

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**Abstract:** In the time of Low-carbon economy, the thought of sustainable development has influenced every aspects of life, and the ideas of green service and environmental management has become increasingly popular in property management. Green property management is now a trend, yet necessarily the only way to meet the owner's needs. Responding to the current call of building energy efficiency, it is inevitable in the development of property management to introduce the idea of green management, advocate green service management, and apply the green building rating system to property management, which is one distinguishing feature of modern property services.

**Key words:** Green Building Rating System; Green Property Management; Applications

The topic of energy saving and emission reduction on the United Nations Climate Change Conference in December 2009, which centered on LCE and the development of Green Building, has come into the spotlight all over the world. And as Chinese Government has clearly stated, China will reduce its carbon emission for 40%-50% before 2020, especially in the real estate industry. Therefore, energy saving and emission reduction, as well as environmental protection, is an important yet urgent task as for a developing country of great population like China. Learnt from Singapore, Green Management is a brand new concept in management in our country. And the Green Property Management derived from it is now an inevitable trend in the development of the present housing industry.

## 1. GREEN BUILDING EVALUATION SYSTEMS

In 2006, Chinese government issued the Green Building Evaluation Criterion (hereinafter referred to as Criterion) to encourage the development of green building. The Criterion mainly applies to the evaluation of residential houses and public buildings like office building, shopping malls and hotels, and it introduces 6 indexes to the evaluation which are land saving and outdoor environment, energy saving and use, water saving and water resources utilization, cost saving and material utilization, IEQ, operation management (residential houses), general performance in a life cycle (public buildings). Each index consists of 3 kinds of items which are control item, average item and advanced item. Control items refer to criteria that are necessary while advanced ones are items whose requirements are higher and harder to achieve. According

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to the fulfillment of the aforementioned average items and advanced items, green buildings can be ranked as one star, two stars and 3 stars.

The Technical Guide of Green Building (2006) almost formulates all the steps in the entire life cycle of a building, such as planning, technique, energy conservation, evaluation and so on. It provides green building with requisite technical guide and also helps to its popularization. Furthermore, policies such as The Double Goal Trial Project of Lower Energy Consumption and Green Building and The Green Building Innovation Prize are carried out by the Ministry of Construction to support the domestic development of green building.

## **2. RELEVANT STUDIES ABOUT GREEN BUILDING ABROAD**

A sustainable developmental human environment is the goal of every construction business all over the world, and in the current situation of high consumption of energy and high pollution, it is of great urgency to practice buildings that are green, intelligent and energy saving. Many a countries and organizations have established policy and rating system on green buildings, and some have already set about drafting standard on sustainable construction. However, due to economic and geographical differences and the per capita amount of resources in every country, there are a great diversity of studies and comprehensions on Green Building.

Many of the developed countries have already established advanced rating system for green buildings. The BREEAM (BRE Environmental Assessment Method) brought up by Britain in 1990 is not only the first comprehensive evaluation system on Green Buildings on earth, but also the first international one applied to market and management. The BREEAM adopts a transparent assessment framework which is open and simple, with 9 main criteria included, such as management, energy, comfortability, land utilization, and the ecological value of the site. While in LEED (Leadership in Energy & Environmental Design Building Rating System) buildings are estimated under 6 criteria like site planning, material and resources, indoor air quality and innovation. It can also direct the market through its identifiable nationwide "certification". The Green Building Challenge 98 put forward by Canada and other 14 western major industrial countries is universally accepted and flexible on 3 architectural types: office building, congregate house, and school building, evaluating 6 aspects such as resource degradation, carrying capacity of environment, indoor environmental quality and cost. The NABERS in Australia is a rating system focusing on the actual operating performance of buildings, whose targets are office buildings and houses in use. It involves 4 parts: General assessment on office building, basic performance of office building, users' response to office building and house assessment. Moreover, CASBEE in Japan, DGNB in Germany and HQE in France are well-known evaluation systems as well.

## **3. FEATURES OF APPY GREEN BUILDING RATING SYSTEM TO THE PRACTICE OF PROPERTY MANAGEMENT**

Facing the social reality and the inevitable trend of future sustainable development in China, striving to develop green buildings is not only the key to resource saving and environment protection but also the key to the sound and fast development of the national economy. To establish the green building evaluation system is more than just green the building operations. Since relevant management measures should be taken to cooperate with the system, green property management has become a necessity of the development of green building.

### **A. Reflect the Green Idea by the Combination of 4 Savings and 1 Environmental Protection**

Taking the grim circumstance of our large population into consideration, it is practical to change the way of developing and save our energy and resources. And what's the most important is, however, to transform resource utilization. Premier Wen Jiabao also proposed that we should speed up the transformation of economic growth and optimize the economic structure, and win in the long and hard fight of energy saving and emission reduction. The 4 savings are land saving, energy saving, water saving and material saving

according to the Green Building Evaluation Criterion. Not only does it reflect the green idea in timbering, building operation and building control while it underlines saving, it is also bonded to environmental protection as it publicizes environmental awareness, advocates actions for environmental protection and guarantees that both the construction index and the management effect reach the standard at the same time.

### **B. Highlight the Process Management by the Combination of Process Control and Feedforward/ Feedback Control**

The green building rating system has revealed a major function of Management, namely control, which is a process that monitoring activities to see if they are going on schedule and correcting errors according to the dynamic environment. An efficient control system ensures that each move is going toward the organizational objective. Therefore, process control plays an important supervising role in management. As the green building evaluation system carries out a series of supervising measures from planning, design, construction stage to the whole operation management stage, waste and pollution are stopped at the very beginning. The whole management process can also be kept integrate and systematic.

### **C. Practice the Ranking System through the Combination of Quantity and Quality**

The setting of control item , average item and advanced item in the Green Building Evaluation Criterion is a remedy for the cost problem among all kinds of companies as it allows them try their best to fulfill the requirement of indexes on the basis of their own conditions. The Criterion has absorbed practical experiences from both domestic and abroad green buildings, especially from Singapore. It also related to the recent development of green building to deepen the evaluation contents and improve the style and ranking method, hence achieved great originality. The ranking system in the evaluation helps to enhance business competitiveness. In addition, foreign-owned property management enterprises, state-owned enterprises, and various private-owned and jointly owned enterprises now can get a specific reference, for the Criterion has regulated the index requirements of green buildings in many dimensions.

### **D. Make A Supervising Institution of the Entire Life Cycle out of the Combination of Systematicness and Flexibility**

Green building evaluation is rather a process management yet not a label stamped in the end. What's more, annual energy consumption simulation and evaluation are needed. In order to make sure the idea of green property management is embodied by construction procedure, material selection, fitment and facility operation, we have to monitor the building and its housing facilities in real time in the process of property management. The architect, landscaping planner and the property manager should not stop communicating and discussing specifically on day lighting, lighting, ventilation, exterior protected construction structure, garden landscape design, function area layout and other aspects of the building, until the building and its regional environment come to terms with the natural and social surroundings. Moreover, they should work out a solid foundation for the future property management.

## **4. THE TENDENCY OF APPY GREEN BUILDING RATING SYSTEM TO THE PRACTICE OF PROPERTY MANAGEMENT**

### **A. Management in Large Scale Needs Guilds to Bridge the Gap**

Because property management is the result of market economy, at present, except a handful of cities, the market of green property management hasn't been formed in most towns. And property management business should call upon the enterprises to follow the demands of the Green Building Evaluation Criterion as well as their own conditions, to carry out green property management to varying degrees, so as to achieve a scale effect. The guild should bridge the communication gap between enterprises and government on the basis of respecting their choice of growing on their own. The guild should also report to government at all times the problems and difficulties enterprises meet in their practice of green property management, and at regular intervals, it should assist government to launch surveys of "environmental protection quality" and statistic works on the business. Meanwhile, they should draft plans and propose suggestions for the policies to be made by government, such as reform scheme, development plan, and industrial policy.

## **B. Standardized Management Demands Operation Procedure Supporting Evaluation System**

Green property management should be given supporting defining and evaluating standards for managing performance, in the conditions that the Green Building Evaluation Criterion which offers green buildings indexes and standards in details is deliberately obeyed. Nevertheless, specific regulations and detailed rules should also be established in the aspect of operation procedure. Property management companies should judge the evaluation system regularly to make sure the applicability, sufficiency and availability of the EMS. In the event of shortcomings, improvement should be continued. Only in this way can the system be corrected and perfected continually and the goal of green management achieved.

## **C. Open Management Means Adopting Advanced Method and Blazing New Trails**

The access to green property management should be opened from planning to design and to construction and every other phase, since this life cycle supervising and managing method has a favorable control effect. We should learn the advanced management measures from overseas before we establish our own rating standards, for the green property management in our country is still in the cradle. Regarding the good example the Green Building Evaluation Criterion has set for green property management, it's indispensable for property management business, which is a follow-up of the real estate industry, to found a thorough operation procedure and evaluation system. Therefore, on the premise of learning from the advanced method abroad, property management enterprises should take the essence and discard the dregs and improve their own initiative.

## **CONCLUSION**

The idea of green property management is based on the launch of green property and the demand of owners for green consumption. It reflects people's requirements of living condition, and it is a transition from the one-way property management gradually to the integrated management of social economic environment. As it turned out to be the key factor that helps property management enterprises take the lead and gain profit, green property management is the inexorable trend. Following the improvement of scientific and technological level and the populace's cultivation, the old property management must be replaced by the green one which is leading ahead to generalization, informatization and specialization.

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