

2012 International Conference on Future Energy, Environment, and Materials

## SWOT Analysis for PCDM Development in Building Energy Conservation in China

Ying Qin, Li Zhang \*

*Beijing University of Civil Engineering and Architecture*

---

### Abstract

Building energy conservation and emission reduction brooks no delay. PCDM is a new channel in this area. Based on the status of building energy efficiency, the process of PCDM development and feasibility analysis on the implementation of PCDM in building area, this article points out implementation barriers, such as no clear methodology, difficulty of approved baseline, complexity of management process, then puts forward suggestions to promote the application of PCDM projects in building energy conservation.

© 2011 Published by Elsevier B.V. Selection and/or peer-review under responsibility of International Materials Science Society.

*Key words:* Building Energy; CDM; PCDM; CERs;

---

### 1. Induction

Energy is currently the world's attention, energy conservation is imperative. With society development, Building energy-consumption together with industry consumption and transportation consumption are named as “three big energy-hungry”, and rising more. So building saving energy becomes very urgent.

The required target of building saving energy will be attained up, financing is key, only replying on the subsidy of government is limited, replying on bank loan has more risk, replying on owner's enthusiasm is low, so CDM(Clear and Development Mechanism ) is one good financing path, in China, CDM have showed large effect in wind power, water power, waste generation, and so on. But it has natural awkward in building area. Because of a single building emission reduction is a small area, with own character of emission reduction project, and no direct-application methodology. [1] On the listed table of methodology

---

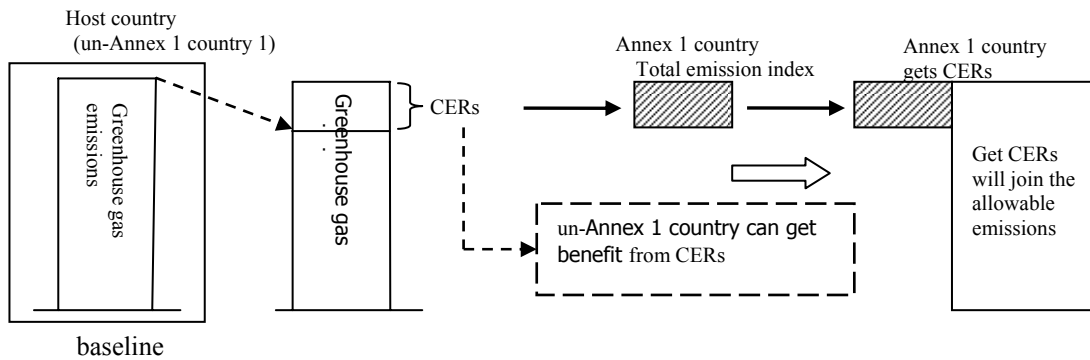
This paper is funded by Beijing Philosophy social science planning project (10BeJG336) \*  
Ying Qin. Tel.:+ 0-010-683-221-49  
E-mail address: qinying1695@163.com.

of official website, methodology in building area is almost blank. So the industry tends to PCDM project. PCDM more fits with diversification of projects of reduction and emission measures in building area, so it will have bright outlook, but with much more difficulty, the article puts forward suggestions to promote PCDM projects in building energy conservation field.

## 2. Base theory of the PCDM

In 1997, the Kyoto protocol, which came into force in 2005, and put forward the clean development mechanism (CDM).PCDM, Programmatic Clean Development Mechanism is to take a series of measures to reduce emissions as a planning program for the implementation of relevant policies or achieving a goal, then registered as one CDM project as a whole, generating the reduction emission amount under the planning scheme will issue corresponding CER after the certified.[3] see Fig 1<sup>[4]</sup>.

Different with CDM, PCDM introduces the concepts of Programmatic program, Programmatic activity and coordination management body, and so on.<sup>[5]</sup> PoA (Programmatic of Activities) refers to the activities of involving, coordinating voluntarily for executing government policies, measures or achieving the specified objectives. CPA (CDM Programmatic Activity) means the one or a series of related emissions or measures of increasing foreign currency in designated areas. Through authorized for all projects by the host country, coordinating or Managing Entity takes for responsibility to put forward PoA.



[5]

Fig.1 Base principle of CDM

## 3. The feasibility and existed problems

### 3.1. The feasibility

Currently, China's annual new construction area is about 20 million m<sup>2</sup>, of which 95% are high-energy houses. As of the end of 2009, new energy-saving building area is 9.6 million m<sup>2</sup> a year, forming of 9 million tons of standard coal in energy-saving capability. Base on the evaluation of some experts, there will be about 30%-50% buildings will show safety reduction or enter into functional degradation period, comprehensive energy-saving renovation will be strengthen of the existing building. Now under lack of funds and technology, building energy-saving will be very difficult. [2]

There exists many limitations of the application of CDM in building energy-saving, Showing as: single residential building applications of the CDM will have the high cost, low emission, big investment risk; residential building demonstration of additionality of CDM projects is not easy; the architectural

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات