

ELITH Project Progress Report
Thailand

ENERGY AND LOW INCOME TROPICAL HOUSING

**Research Programme on Reducing Energy Consumption Cost and GHG
Emission for Tropical Low-income Housing:
Thailand Contribution**

Submitted to

WARWICK UNIVERSITY

By

**The Joint Graduate School of Energy and Environment (JGSEE)
King Mongkut's University of Technology Thonburi (KMUTT)**

for the period of

October-December 2013, and

January-March 2014

Summary of Project Activities

Period: Oct - Dec 2013 and Jan - Mar 2014

This report provides a summary of activities undertaken during the two quarters. The major activities are described in the followings.

1. Review of Literatures on Features of and Patterns of Energy Use in Medium and Low Income Houses

In accordance to the work plan submitted in the previous progress report, a review of literatures on features of and patterns of energy use in medium and low income houses in Thailand would be submitted in the period of Oct – Dec 2013. A similar review for international situation was scheduled to be submitted in the following period. However, since the present report is submitted at the end of Jan-March 2014 period, the content of the report pertains also to international situation in the same report.

The present review report includes geographical and socio-economic information on Thailand, an examination of the notion of low income houses, recommended house designs for each region, an examination of features of low income houses constructed by a state enterprise, breakdowns of energy consumption in typical households, and a preliminary examination of carbon content of Thai housing stocks.

2. Other Activities

Other major activities are as follows.

2.1 Visit to the National Housing Authority of Thailand (NHA)

On January 14, 2014, the Thai project team met with 11 representatives from NHA at Building 2 in the NHA compound in Bangkok. Figure 1 shows a photograph taken during the meeting. The project team introduced team members, described the main objective of the project and work plan to the Director, the Vice-Director, and 10 researchers/staff of the Housing Development Department of NHA. The NHA representatives agreed to appoint a team to work on a collaboration research with the project team. The NHA representatives also asked for the knowledge transfer from the research team. The research team from KMUTT might give a lecture related to energy efficiency in buildings and also details of this project to NHA staffs. The research team agreed with the idea. A lecture or training will be carried out in the future at NHA. A formal letter of invitation to the director of NHA for collaborative research was later submitted and a formal letter of response was received. The NHA welcome the invitation and assigned a deputy director of Housing Development Department to work with the project team. Another round of meeting between the project team and the team from the NHA is planned to initiate the collaborative research, first to create a joint research plan, to assess training needs for NHA personnel, and to elaborate on methodology of research.

Figure 1 shows the first meeting between the project team and representatives of the Housing Development Department of NHA.



Figure 1 A meeting with representatives from NHA on January 14, 2014.

2.2 Preparation of Project Website

According to the work plan, a website of this project in Thailand will be created. The website content is being prepared. The portal is being designed and the basic design is primarily agreed on. It will have a link to the Building Energy Science and Technology (BEST), which is the host academic unit, website.

2.3 Preparation on the Demonstration House Model

According to the work plan, a model demonstration house will be used for training and demonstration of features of low energy house. A full-sized house model located on an experimental site of BEST in the Bangkhuntian campus of KMUTT is being retrofitted for use to serve this objective. Figure 2 shows the experimental model and Figure 3 shows its floor plan.



Figure 2. The experimental model house for demonstration of energy efficient technology.

