Project Summary

Project Background
The Sino-German EEB Project concerns the financing of energy efficient rehabilitation measures for municipal buildings in the area of 10 districts in the City of Tonghua comprising 294 residential buildings with a gross floor area 1.1 million m². With the agreed loan of EUR 36.4 million the buildings will be refurbished according to advanced standards thereby contributing to energy savings of at least 60%. The planned energy efficiency measures include the insulation of exterior walls and roofs, the installation of heat-resistant glass windows, heat meters and the rehabilitation of the in-door heating system and the secondary district heating network.

Project Objectives
The emphasis is on improving the building envelope and the in-door heating systems. The standards to be applied are as follows:
- Exterior wall insulation: 12 cm, λ = 0,042 W/mK
- Roof insulation: 14 cm, λ = 0,033 W/mK
- All windows low-e glass with air gap: Uw=2,0 W/m²K; SC=0,65 (incl. Frames)
- Automatic thermostatic valves
- Heat metering
- Heat insulation of secondary piping
- Hydraulic adjustment of the heating system

Project Activities
Package 1: Quality Assurance, Capacity Building and Kick-off meeting
Package 2: Assistance during Implementation
Package 3: Final Review, Quality Control and verification and recommendations

Implementation Features
a) Provision of know-how transfer from experiences gathered in Energy Efficiency (EE) projects and assistance to the PEA on the coordination and supervision of energy saving refurbishment measures, project and site management and monitoring and verification of control sample buildings.
b) Assist the PEA to verify that the implementation and related processes of the program are in line with the stipulations of the contractual agreements.
c) Assist the PEA in achieving the project targets as originally scheduled and within the specified budget.

Services Provided
- Capacity Building and Training on energy efficient refurbishment of buildings, international best practices and Chinese retrofitting project experiences
- Assessment whether the quality of delivered goods and materials is according to KfW standards
- Quality assurance of the rehabilitation measures during implementation by on-site inspections and supervision of works
- Assistance during take-over of construction works

P.R. China
Energy Efficient Refurbishment of Residential Buildings (EEB) in Tonghua

Client
Tonghua Hengrui (Project executing Agency = PRA) / KfW

Duration
07/2012 - 12/2012

Personnel
- 5 internat. STE (5 PM)
- 9 national STE (16 PM)