

Project Summary

Projekt Background

Afghanistan is a priority partner country for German and international Development Cooperation. German Technical Cooperation (GTZ) with Afghanistan began in 2001 after the collapse of the Taliban regime. The GTZ headquarters provides a work space for many international and local employees of the GTZ. The project concerned renovation and new build of the German Agency for Technical Cooperation (GTZ) headquarters 'German House' in Kabul. An existing building and two new buildings were redeveloped into an office complex with a restaurant.

Project Objectives

The aim of the project was to reduce the heating and cooling loads and develop an energy efficient and economically viable energy supply for the German House with the greatest possible use of renewable energy. This included the electricity supply, heating and cooling systems and plumbing.

Project Activities

- Development of a supply concept to fulfil the above mentioned aims;
- Energy demand analysis as well as determination of heating and cooling loads;
- Recommendations for passive and active use of solar energy for reduction of cooling and heating loads.

The general heating and cooling concept is based on the following:

- Passive solar: Sufficient eaves to prevent direct radiation in summer. Thus requires an extension of the existing roof
 - Heating elements: Radiators along the entire window facade and below each window; combined floor and wall heating
 - Cooling: using floor and wall heating circuits for cooling, supplemented by ceiling cooling
- Cost estimation and economic analyses of the individual systems;
 - Calculation of the piping system, radiator areas, heating and air conditioning system;
 - Dimensioning of the solar hot water system;
 - Creation of the necessary project plans and technical specifications for tendering of the work;
 - Technical specifications, project planning;
 - Ensured inclusion of all measures in overall concept;
 - Assistance with the tender evaluation
 - Construction supervision;
 - Creation of documentation.

Services Provided

- Fundamental analysis and concept creation
- Implementation planning
- Creation of tender documents
- Tender evaluation
- Construction supervision
- Documentation

Afghanistan

Energy concept and implementation for the "German House" in Kabul

Client

German Agency for Technical Cooperation (GTZ)

Duration

01/2009 – 07/2010

Personnel

- 5 international STE (3PM)
 - Energy efficiency experts
 - Heating technician
 - Architect

