Solar-Passive

SOLAR-PASSIVE BUILDING DESIGN

INTRODUCTION

Houses and buildings in South Africa are seldom designed from an energy consumption or energy-efficiency perspective. The energy characteristics of low-cost housing are particularly poor, resulting in high levels of energy consumption for space heating in winter. The net result is dangerously high levels of indoor and outdoor air pollution in townships, due mainly to coal burning.

Research has shown that low-cost housing could be rendered 'energy smart' through the utilisation of elementary solar-passive building design practice. This can result in fuel savings of as much as 65%. Such savings on energy expenditure will have a major beneficial impact on the household costs.

Energy-efficient homes may be constructed at the same direct cost (and lower life-cycle cost) as energy-wasteful houses. The challenge is to develop awareness and to ensure implementation of basic energy-efficiency principles.