

## CHAPTER 5 - ENERGY DEMAND

500

### 505.03 EFFICIENCY OF BUILDING PERFORMANCE



#### INTENT

To achieve high energy savings by improving the performance using advanced energy saving techniques.

#### REQUIREMENT

For Golden and Platinum Sa'fa and for all new buildings, following requirements can be replaced by using techniques that enhances the building performance.

- 501.01 Minimum Envelope Performance Requirements
- 501.02 Thermal Bridges
- 502.04 Lighting Power Density - Interior
- 502.05 Lighting Power Density - Exterior
- 502.10 Exhaust Air Energy Recovery Systems and Condensate water
- 502.16 Control of Chilled Water
- 502.18 Cooling of Corridors and Public Areas
- 502.22 Heat Exchangers
- 503.06 Cost of the Expected Performance Assessment
- 503.07 Performance and Commissioning Reports
- 504.03 On-Site Renewable Energy– Electrical Power Generation
- 505.01 Reduction of Energy Demand

The techniques used should increase the energy savings of the building. The energy savings percentage of the building when compared to a building designed with Silver Sa'fa regulations shall be at least 15% for Golden Sa'fa and 20% for Platinum Sa'fa.

#### SIGNIFICANCE

Energy is a vital component and a critical economic issue for buildings. Design and selection of equipment plays an important part in the energy performance of the building. An efficient building design that incorporates optimised building envelope, improved equipment efficiency and controls and smart operational strategies can substantially reduce the energy use of the building. This will reduce the environmental and economic impacts of excessive energy use.