

## 9. TIPS FOR ENERGY EFFICIENCY & SUSTAINABLE LIVING

With rising electricity, gas and fuel prices "Energy efficiency" and sustainable living is becoming more than just a buzzword. It is an accepted way of life now. Implementation of BASIX (Building and Sustainability Index) introduced in 2004 by NSW government is an initiative and commitment towards reduction in consumption of water, achieving thermal comfort by design, reduction in energy consumption. It is possible to cut down costs without significantly affecting your lifestyle.

### Insulation

Insulation is essential to keep your home warm in winter and cool in summer. A well insulated home is warmer in summer and cooler in winter. Insulation should be in the roof, ceiling, external walls and under suspended floors. Existing can have insulation installed in ceiling and under floor if access is available. Walls can be insulated during recladding or replastering.

Batts-glassfibre, rockwool, sheepwool and polyester are suitable for use in ceilings, framed walls and under timber floors.

Blankets-foil based glass fibre, polyester and rockwool-suitable for use under metal roof Boards-Expanded or extruded polystyrene-suitable for cathedral or raked ceiling under timber floors and suspended concrete floors, around concrete slab edges and within framed and fully masonry walls.

Loose fill-suitable Cellular fibre, sheep wool and granulated rockwool-suitable for use in ceiling, must be professionally installed Reflective-Reflective foil, concertina foil batts, sarking and multi cell reflective foils-suitable to use directly under roof, in ceilings framed walls and under timber floors.

### Buy Energy-Efficient Products

Look for the Energy Star label when you are buying items including major appliances.

### Draught proofing

Whether you have old or new home, draughts or air leakage can be a major source of loss of energy efficiency.

In winter, draughts can increase your heating cost by 25%. Draught proofing your home is easy and cost effective.

Look for gaps-under and around doors, windows, air outlets, vents, stairways, architrave and skirting boards.

### Shading

Shade east and west facing windows with an external shade-cloth blind in summer.

### Windows

Windows are critical to overall energy efficiency of your home-as much as 40% of heat lost from home is lost from

Windows and upto 50% of unwanted heat gain is through the window. Unprotected single panes of glass lose almost 10 times more heat than the same area of insulated walls. Appropriate window selection and protection can reduce heat loss through windows by upto 70% and save you around \$ 200 each year in reduced heat.

### Preventing Winter Heat Loss

There are number ways this can be achieved:

- Double glazed windows

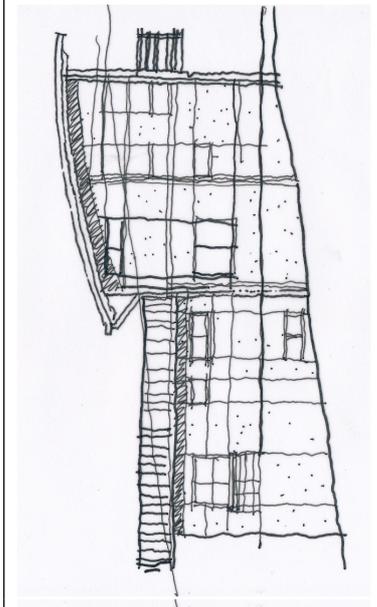
*Copyright Dynamic Design Solutions 2015: This is compiled by Lalit Mital, Dynamic Design Solutions, only as a guide and is not a comprehensive list. It must not be copied in part or full without permission of Lalit Mital, Dynamic Design Solutions. Disclaimer: The information is based upon 'Live Energy Smart' A NSW Government Initiative. It is intended as a guide only and its currency and accuracy can not be guaranteed. It should not be taken as a advice as the author takes no responsibility. Readers should do their own research and take their own decisions.*



next level...



Taking architecture to



- Low -E glass (Low emissivity glass)
- Curtains and blinds

Insulated shutters

### Preventing Summer Heat gain

It is better to stop the sun's heat from reaching the glass, rather than deal with the problem once the heat has entered your home. In summer, external shading is much more effective at keeping your home cool than internal blinds or curtains.

### North facing windows

These windows require a shading device that can block summer sun without reducing the amount of sun entering the house in winter. There are number ways this can be achieved:

- Removable or adjustable external awnings and shutters
- Eaves and pergolas
- Shade battens on pergolas
- Deciduous trees and vines

Wide verandahs are not recommended over north facing windows. Although they are effective in keeping out the summer sun, they generally do not allow adequate winter sun to enter the home.

### East and west facing windows

These windows should be well shaded from morning and afternoon summer sun:

- Awning, external blinds and shutters that cover the entire face of the window are most suitable.
- Landscaping and vegetation, particularly deciduous trees, shrubs and vines can provide excellent shade in summer, without obstructing the winter sun.

### Add a ceiling fan\*

Ceiling fans are a great way to conserve electricity year-round. They are economical and efficient, and they use about the same amount of energy as a 100-watt light bulb. In summer, set your fan to spin counterclockwise, then set your thermostat a few degrees higher to save as much as 40 percent on your cooling bills. In winter, switch fan blades to spin clockwise and save up to 10 percent on your heating bills.

*\*Taken from Better Homes and Garden website*

### Install Skylights\*

Use daylight whenever possible. Install skylights in rooms with no windows. During the day, you might not need to turn on a light.

*\*Taken from Better Homes and Garden website*



next level...



Taking architecture to

