

Buildings Efficiency

New Zealand cities have many commercial buildings which use three times as much energy per square metre as their more efficient counterparts. Acres of glass with no external shading ensure that, without large refrigeration and heating systems, the occupants will overheat in summer and freeze in winter. All the lights remain on regardless of occupancy and daylighting simply because one remote switch lights up an area the size of the average home. Good design can slash running costs and minimise comfort, for little or no increase in capital cost. Once built, however, many opportunities for cost-effective improvements are lost until major refurbishments.

The present situation is set to deteriorate as the new uniform building code being prepared by the Building Industry Commission will not contain provisions for energy efficiency because the Commission considers resource management issues outside its terms of reference. Overseas experience shows that government needs to give direction to prevent the energy efficiency of building stock from declining, and locking a country into high running costs for the decades that the buildings stand.

Wright and Baines have estimated the economic "reserves" of conserved energy in New Zealand homes. They calculate that a number of simple electricity management measures applied throughout the country, have the economic potential to provide energy equivalent to the output of 12 power stations the size of the now scrapped Luggate dam.

New and not so new technologies offer the opportunity to slash energy use. Miniature fluorescent lamps could replace incandescent bulbs and reduce the nation's peak electricity demand. High efficiency shower heads, spray taps and hot water cylinder blankets can cut the home hot water heating bill dramatically. In homes the widespread use of these items

