

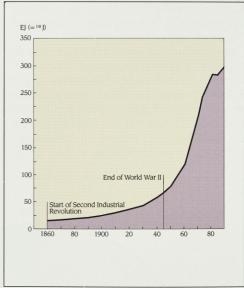
HOUSTON PHOENIX Gasoline consumption versus urban density in principal world cities (1980) (Newman, 1987) with 70 DETROIT the addition of Auckland, (Fitzsimmons pers comm 1989). DENVER 65 · LOS ANGELES SAN FRANCISCO 60 55 CHICAGO 50 NEW YORK GASOLINE GJ / Capita 45 40 MELICURNE PORONTO AUCKLAND 35 30 ADELAIDE 25 20 15 COPENHACEN 10 HONG KONG (293) 5 40 100 110 **URBAN DENSITY / ha**

A home built for the sun, with solar panels and direct gain. It has been estimated that such simple efficiency measures in New Zealand homes would free up energy equivalent to 12 power stations the size of the scrapped Luggate dam. Photo: Energy Management Group

would be cheaper than building new power stations. But just try finding them in the hardware store.

Some new refrigerators use a third the electricity of others. But now that the government-labelling scheme is inoperative, we lack the information to weigh efficiency in our purchasing. Low-income householders may require paybacks of months, not years, and tenants (commercial as well as household) are seldom willing or able to invest to save on their energy bills.

Similarly in industry there are many choices available in the efficiency of equipment for raising heat and providing mechanical power. Where both heat and power are required together they can be cogenerated at an efficiency of 80-90 percent rather than in inefficient centralised power stations. Scandanavian pulp mills are run this way, the operation of the mills providing virtually all power. But most businesses would require any investment in energy efficiency to pay back in 2-3 years, and many would want a 1-year payback.



Selling Negawatts For Fun And Profit

Energy efficiency technology is now sweeping American and European markets – since 1979 the United States has obtained more than seven times as much energy from savings as from new energy supply. But most governments as well as businesses are still more interested in "corporate socialism" than in level market playing-fields.

Were it not for perverse corporate goals, energy supply companies and local supply authorities would be the organisations best able to sell energy efficiency technology. The main reasons consumers do not buy into the energy-efficiency menu are the lack of information in the market place, and the quick paybacks usually required by householders and small businesses. Energy suppliers have all the information needed, and can afford substantial capital investments with long payback periods.