

A WEEK IN THE SUN

THE Solar World Congress, starting next Sunday in Perth, has attracted the biggest ever gathering of solar energy experts to Australia.

More than 1000 experts will spend the week discussing thermal applications for building and industry, solar-powered electricity, solar-powered machines and the economic, environmental and legal aspects of using the sun.

WA is at the forefront of solar energy research through the Solar Energy Research Institute of WA (SERIWA), which currently supports more than 40 research projects.

Gloucester Park will be the scene of a Solar Energy Exhibition, open to the public next Sunday and on Thursday, August 18. Among the 87 exhibitors from 15 countries will be WA's world solar energy innovator Solahart. Another exciting exhibit will be that of McDonnell Douglass Astronautics, which is to market systems to power entire small communities.

By KAREN O'MAHONY

A SOLAR house can save up to 80 per cent of the average household's annual energy bill.

"Passive" solar houses — those designed to absorb and distribute natural heat — have been around for several years, but the main problem with them has been a lack of hard data.

The principles are quite simple — the house is faced north and building materials are selected to maximise the storage and slow release of heat.

Until recently architects have been working on a 'hit-or-miss' basis, says Garry Bavistock, director of Tectoprojects. He has spent the last five years revolutionising the solar housing industry.

He will appraise the energy efficiency of any home, feeding his data on direction and size of windows, block positioning, elevation of eaves and roofs — into a computer. From this he can make suggestions for improvement.

A passive solar house need not be architect-designed. Builders can provide such a home at medium

price, and some project solar homes are available.

Solar houses do not look radically different from normal houses. They all have large expanses of glass facing north to maximise the warmth of the sun in winter, and minimise its effects in summer. They have few if any windows facing south.

Mr Bavistock has developed an ingenious method of increasing the solar input with what he has dubbed a solar pergola. It is in effect a glass encased area, like a greenhouse, topped by angled wooden beams which allow the sun in during winter when it is low in the sky but keep it out when it is blazing down in summer.

According to Mr Bavistock, a well designed solar house should cost only \$2000 to \$3000 more than a comparable conventional house.

"That cost is off-set in a couple of years — especially when some people pay that much for central heating," he said.

Strategically placed fans along the north-south axis of the house, push the flow of warm air through the house.