

## 'Green dream' home raises the bar from 6 to 9

While the housing industry debates the commitment by the Council of Australian Governments (COAG) to increase the energy efficiency provisions of the Building Code of Australia from 5 to 6 Stars, property developer Mirvac has begun building a 9-Star energy-rated prototype home in the Melbourne suburb of Waverley Park.

According to Mirvac, the 'Harmony 9' house design will dramatically reduce energy use over a 5-Star home, and also

save on water use. Features include:

- 'reverse brick veneer' construction, with internal bricks acting as thermal mass to stabilise temperature
- high-performance wall and ceiling insulation and double-glazed windows
- north-facing living zones, with angled shading and cross-ventilation for summer
- photovoltaic solar panels and solar hot water
- a 20 000 litre rainwater tank
- a smart meter to motivate occupants to save energy, gas and water
- a 100 per cent recycled concrete slab, said to be the first of its kind in Australia.

'The Harmony 9 design process can be likened to developing a concept car,' said Mirvac's John Eckert.

'Not everything we have learned is suitable for implementation straight away, but our knowledge paves the way forward not only for



**Harmony 9 design innovations include solar cells that also act as angled summer shading for windows.** Mirvac

Mirvac, but for the entire development industry.'

## Global wind power surges in 2008

A Worldwatch Institute report claims global wind capacity increased by an estimated 27 051 megawatts (MW) to a total of 120 798 MW in 2008, a growth rate that exceeded the annual average of the past decade.

The USA led in new installations, surpassing Germany to rank first in wind energy cumulative capacity and electricity generation.

The report also revealed:

- For the first time last year, wind power represented Europe's leading source of new electric capacity, well ahead of natural gas and coal. By the end of 2008, wind power accounted for 8 per cent of Europe's power capacity.
- Asia accounted for almost one-third of global wind capacity, with China quickly surpassing its 2010 wind target of 10 000 MW



**Wind power now accounts for 8 per cent of Europe's power capacity.** iStockphoto

- and ending 2008 with 12 200 MW in place.
- Nearly 400 000 people are employed by the wind industry worldwide (though this number could slide in the near term due to project financing difficulties, particularly in the USA).
- Wind now generates more than 1.5 per cent of the world's electricity, up from 0.1 per cent in 1997. Eighty countries are now using wind power on a commercial basis.

## World's biggest fish benefiting at Ningaloo

Numbers of whale shark are steady and even increasing in some areas off Ningaloo, Western Australia, according to a recent paper published in *Endangered Species Research*.

The authors of the paper – based on an analysis of data collected by Earthwatch volunteers, tourists, divers and researchers – have issued a worldwide call to holiday makers and divers to join in a global effort to monitor and protect the largest – and one of the rarest – fish in the sea.

'Thanks to increasing levels of data collection, we're finally able to estimate how many whale sharks appear annually, how long they typically remain

at Ningaloo Marine Park (NMP), their patterns of arrival and departure, and shifts in their population structure,' says one of the authors, Brad Norman, founder of the independent ECOCEAN whale shark project (see *ECOS* 133 and 137).

Jason Holmberg, lead author on the ESR study states that 'we have been able to create statistical models demonstrating a modestly increasing annual population of around 150 sharks. We're also seeing an increase in the number of smaller whale sharks feeding at the reef and returning in subsequent years.'

'For the first time, our recent study demonstrates a

set of population models that can be expanded to incorporate other whale shark aggregations in the Indian Ocean if and when sharks can be linked between them.'

The study complements another just published with Curtin University, Western Australia, which acknowledges the whale shark ecotourism industry as a AU\$ 4.76 million boon for local communities working to protect this threatened species.

Similar economic benefits could be available at other whale shark "hotspots" around the world.

A related study in the Philippines in collaboration



**Volunteers of an Earthwatch-ECOCEAN project that recently counted whale shark numbers off Ningaloo.** Steve Lindfield, ECOCEAN

with WWF has so far recorded 250 individual animals, while another in Mozambique has confirmed sightings of more than 350 identified individuals.