

States have big plans for smaller footprints



Increased environmental flows to the Murray River is one of the targets of South Australia's strategic plan. CSIRO Science Image/Gary Unwin Photography

The Western Australian and South Australian Governments recently highlighted their intentions to actively reduce their states' environmental impacts

through enhanced renewable energy commitments.

The WA Government is aiming to source 20 per cent of the state's energy needs over the

next three years from solar, wind and new investments in wave power, as part of a longer-term climate-change action plan.

Premier Alan Carpenter said the three-year target was expected to reduce greenhouse gas emissions by nearly 100 000

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tonnes, the equivalent of taking 21 000 cars off the road.

A WA government taskforce report says by 2050 the state could cut greenhouse gas emissions 50–60 per cent below 1990 levels through an aggressive energy-efficiency program and renewable energy use.

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Meanwhile, South Australian Premier Mike Rann announced that his government has updated its 2004 state strategic plan to include the goals of reducing the state's ecological footprint by 30 per cent by 2050 and becoming a leader in renewable energy.

The state's environmental targets now include:

- Renewable energy sources to comprise 20 per cent of the state's electricity production by 2014;
- Greenhouse gas emissions limited to 108 per cent of 1990 levels during 2008–2012, as a first step towards a 60 per cent reduction by 2050; and
- Environmental flows in the Murray River increased by 500 GL by 2009, with a longer-term target of 1 500 GL by 2018.

At 7 'global' hectares, South Australia's ecological footprint is higher than the OECD average of 5.2 hectares and the world average of 2.2 hectares.

Spray-on protection reduces water loss

An Australian company has developed a new product which it claims can significantly reduce evaporation from water storages. The silicone-based liquid forms an almost invisible one-micron-thick film on the water surface, creating a barrier against evaporation.

Up to 40 per cent of the water in a shallow farm dam can be lost annually to evaporation. In Queensland, for example, this would translate into an estimated loss of up to 1 000 000 megalitres a year from the state's total irrigation storage capacity of around 2 500 000 megalitres.

Graham Strachan, Director of Ultimate Agri Products, which developed the new anti-evaporation liquid called Aquatain, said, 'It's easy to

apply, as the silicone molecules repel each other giving almost instant coverage to the whole surface.'

'It is also very cost-effective. It certainly costs significantly less than replacing the water lost to evaporation. On average, for a 1-hectare dam over a period of two months, the cost of Aquatain coverage is approximately \$160,' Mr Stachan explained.

'Aquatain is safe to use on all types of water storages. Its components are approved by the Australian Food Standards Authority for use in food processing – for example, in the non-stick spray used in bakeries.'

The product is being evaluated by the CRC for Irrigation Futures as part of a broader



A shallow farm dam can lose up to 40 per cent of its water annually to evaporation. CSIRO Land and Water

study to improve the performance of monolayers (see page 33), which currently are less effective than plastic dam covers. Plastic covers can be used on smaller dams, but are more expensive than pump-on solutions for very large dams – and according to Strachan,

water authorities have expressed interest in Aquatain for use in 'mega dams' that supply water to metropolitan areas.

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