

HOW POWER IS GENERATED

1. Air at ground level is heated by the sun's radiation in a 4.5-mile-wide greenhouse

2. Its roof slopes upwards so that the warm air drifts up towards the 3,281ft chimney

3. Because space becomes more confined towards the centre of the greenhouse, the air speed rises. When it reaches the bottom of the chimney, where 32 turbines are located, it has reached a constant 35mph

4. The tower's height ensures that the air at the top is always colder than at ground level

How it compares

Solar tower, Australia:
3,280ft

CN tower, Toronto:
1,815ft

Petronas Towers,
Kuala Lumpur: 1,483ft

Canary Wharf,
London: 777ft

3,281ft tower

Turbines

Greenhouse

The chimney that stacks up energy

IT WILL be the largest, cleanest chimney ever built, and the tallest structure in the world.

Experts have designed a 'solar tower' more than half a mile high which will generate electricity from hot air.

The £308million pillar will provide enough power for 200,000 homes when it is built in the Australian Outback.

At 3,280ft tall and 427ft wide, it will be visible from 80 miles away. It will also dwarf the world's tallest tower – the 1,815ft CN Tower in Toronto, Canada – and the tallest buildings, the 1,483ft Petronas Towers in Kuala Lumpur, Malaysia.

Electricity will be generated by harnessing powerful convection currents caused by air at the foot of the tower being warmer than that at the top.

The air will be warmed in a surrounding circular greenhouse 4.5miles across. It

BY MARTIN NEWMAN

will then be allowed to rush into the base of the chimney, passing through 32 turbines and so generating power.

'Every single independent expert we have spoken to has no doubts that this is possible,' said Roger Davey, of developer EnviroMission.

'It's a huge power generator of clean, green power.'

EnviroMission is awaiting final planning approval from the New South Wales government but work on the tower, at Tapio station near the border of Victoria and New South Wales, should begin next year.

It could be operational within three years. 'Unless the chimney falls over, or they pick totally the wrong materials for the greenhouse, the solar chimney idea should work,' said a spokesman for the Australian Solar Energy Society.