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Power from hot air cheap boost to gas turbine output

(a spin-off from solar research)

Sunoba Pty Ltd today announces details of a new heat engine to boost the output of open-cycle gas turbines.

The new engine, called the Expansion-Cycle Evaporation Turbine (ECET), is derived from an invention for solar thermal power generation. The inventor, Dr Noel Barton, says

"The new engine relies on evaporative cooling of gas turbine exhaust at reduced pressure. The ECET can boost gas turbine output by more than 20% without using extra fuel. Per installed MW it is likely to cost no more than a gas turbine and much less than a steam turbine."

Gas turbines are installed as peaking plants in the electricity grid, where they are sparingly used but must respond quickly at peak demand. Peaking plants must also be relatively cheap to install. Steam turbines are not suited for this role since their capital cost is high and they are slow to start.

The cost of peak electricity produced by gas turbines is expected to be clearly reduced by installation of the ECET booster. The device will also save on fuel and emissions.

The link to solar thermal research is explained by Barton:

"Originally, I invented these new engines to generate power from hot air warmed passively by the sun under a transparent insulated canopy. I'm excited about this major new application that will lead to reduced fuel consumption and reduced CO₂ emissions in the electricity grid."

The new engine is completely original, worldwide, and is protected by patent applications. The technology is available under licence to manufacturers.

Further details:

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