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# Engine developed to slash emissions

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AUSTRALIAN researchers say they have found a way to slash carbon emissions from coal-fired power stations by doubling their efficiency, opening the way for the long-term survival of the coal industry.

They have developed a new type of engine that generates energy using heat already produced in power stations but lost into the atmosphere, allowing a coal-fired power station to halve its emissions.

Former mining union official John Maitland and his company ourSun announced the development yesterday to coincide with the international climate change conference in Copenhagen.

Mr Maitland told *The Australian* he had registered a patent for the new engine, which had been proved viable in computer simulations and was now moving

to a prototype stage with commercial viability expected by 2013.

“The IPCC (Inter-governmental Panel on Climate Change) wants the world to reduce its emissions by 50 per cent by 2050,” Mr Maitland said.

“Here we have a new engine that can deliver close to that just using energy efficiency. Successful development would secure coal generation jobs and those in energy-intensive industry while addressing climate change.”

Researchers around the world are racing to develop technology to reduce carbon emissions from coal-fired power plants.

Development of so-called clean-coal technology will be crucial for Australia, which relies heavily on its coal exports.

Much of the push for clean-coal technology has been based on so-called carbon capture and storage — a yet-to-be proven technology that would capture carbon emissions from power stations and bury them in under-sea formations.

But Mr Maitland said his company’s engine attacked the problem by increasing the efficiency of existing power stations.

It was also designed to be retrofitted to any power station using any energy source — nuclear, solar, gas or biomass.

Mr Maitland said most power stations lost two-thirds of the heat they generated into the atmosphere.

The ourSun engine would harness some of this energy, increasing the thermal efficiency rates up to more than 60 per cent.

The company was applying to the state governments of Queensland, NSW and Victoria for grants being offered to commercialise technologies that would clean up the coal-fired power industry.

Mr Maitland is a former national secretary of the mining division of the Construction Forestry Mining and Energy Union and was previously on the board of Eraring Energy in NSW.