



# Labor puts faith in clean coal to meet targets

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*But most of eastern Australia's future energy demands are likely to be met by more expensive gas*

IN the Labor Party's dream of an affordable, low-emission energy future, technology that captures and stores greenhouse gases from coal-fired power stations (CCS) is the night-light that keeps them safe from the monster that lives under the bed. That monster is nuclear energy.

Last week, in an intriguing development, Environment Minister Peter Garrett took flailing opposition leader Brendan Nelson to task for maintaining an open mind on nuclear energy as a possibility in the future energy mix of Australia.

Within hours Nelson had obliged with yet another backdown. So now we have bipartisan support for an energy supply strategy that eschews any mention of a proven zero-emissions technology for one that is set to remain promising, experimental and uncosted well into next decade.

Clean coal technology, being both available and affordable, is a crucial part of the energy mix in most forecasts of Australia reaching very low levels of greenhouse emissions by mid-century without major economic pain. If clean coal were removed from the modelling, similar outcomes could be achieved if nuclear energy were used as a substitute. After, that things start getting nasty.

In 2006 a report by the Energy Supply Association estimated the wholesale cost of electricity would increase by about 50 per cent to make cuts of 30 per cent by 2030, including a best guess on the cost of clean coal. Without it and without nuclear the wholesale cost of electricity would double, translating into retail price increases of 50 per cent.

That's just to get to 30 per cent emissions cuts. Labor has promised 60 per cent by 2050 and its lead climate change adviser, Ross Garnaut, is now talking about 70 per cent to 90 per cent.

Next month the co-operative research centre for clean coal technologies plans to finally begin its long awaited trial in the Otway Basin to start pumping and storing carbon dioxide underground. They are confident it will work, based on other research completed overseas.

Since component technologies are mostly proven in other applications, engineering clean coal is the least of their worries.

More troubling was the decision on January 30 by the US Energy Department to pull out of the Bush administration's clean coal flagship project, FutureGen, citing unacceptable cost blowouts. Since its original budget estimates of \$US1 billion in 2004, the cost of steel, concrete and other construction materials has skyrocketed because of a massive upswing in global demand, driven of course by the relentless growth of the Chinese economy.

These cost increases have been felt by all capital-intensive power technologies. New capital costs estimates reported by the national generators' forum show increases of between 30 and 60 per cent in the last year to build most capital-intensive technologies including coal, nuclear, biomass and geothermal.

Not only are big developing economies increasing their greenhouse emissions, but they're making it even more expensive for developed countries to build new clean power generation capacity.

The one technology that has avoided getting caught in this spiral, because of its cheaper capital costs, is gas. Because it has half the greenhouse emissions of coal, most new-generation investment in eastern Australia is likely to be gas-fired.

Under the ESAA modelling, in a world without clean coal or nuclear, gas will end up powering about half of Australia's electricity supply. It is currently about 25 per cent more expensive than coal, although the huge spike in demand is likely to make an expensive fuel source even more expensive.

Coal seam methane is found in porous seams of coal that can be more than 400 metres underground — too deep to be extracted cost-effectively. They look set to more than adequately replace the dwindling ethane reserves from the Cooper Basin, and companies such as Queensland Gas, Santos, Origin and Arrow are expanding known reserves.

That's encouraging from the perspective of having enough gas to supply eastern Australia if needed, but east coast gas prices have been largely immunised from much higher world prices, partly because the markets aren't linked. They soon will be.

The link would be a liquid natural gas (LNG) export facility, of which two are already planned for Queensland. Export prices are above \$6 a gigajoule, well above the \$3.50 domestic price.

Late last week British energy giant Frank Chapman, the chief executive of British gas giant BG Group, wrapped up a tour of key gas assets, including a meeting with Prime Minister Kevin Rudd, during a look at possible sites for another export facility at Gladstone.

When Britain's inefficient coal mines were closed in



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the 1970s it turned to North Sea gas reserves. Enthusiastic exporting means these are also in decline and Britain is increasingly forced to import gas.

In January the British government announced a reversal of its nuclear energy policy, releasing a white paper that re-embraces nuclear as a key part of its

energy strategy in a carbon-constrained future.

Peter Garrett will be back later this year to approve new and expanding uranium mines that will probably end up supplying this new generation of British reactors. How ironic.