

Nuclear power: 'too big, too expensive'

Demand for electricity is reaching record highs. SARAH WORTHINGTON explores whether nuclear power could be a solution for New Zealand.

As protesters demonstrate against wind farms, power pylons and coal-fuelled generators, electricity companies in New Zealand must be feeling as low as the water levels in our hydro lakes.

Demand for electricity has reached record highs this winter, and the need to secure a reliable and cost-effective power supply is now becoming urgent.

Sustainable sources of power such as wind are joining the list of generation methods that some people regard as unacceptable. So power companies, political parties and those concerned with commerce and industry are once again weighing up the environmental and industrial benefits of using nuclear power in New Zealand.

Michael Barnett, chief executive of the Auckland Chamber of Commerce, says the threat of power shortages in the upper North Island makes it difficult for businesses thinking of investing in the region.

"The possibility of [power] shortages impacts on Auckland's credibility as a holder of good infrastructure for businesses looking to expand or come and invest here," he says.

"It is not a sound environment for businesses trying to deliver international contracts."

Barnett says he is particularly concerned that little has been done to address the issue of power shortages and believes that there needs to be further debate into options like nuclear power.

"We have been talking of shortages for years and no one, it seems, is taking responsibility for a solution. I would have expected the Electricity Commission to have made this a priority but they have not," he says.

"There are any number of scenarios that need to be explored, and nuclear power is one of them."

However, Roy Hemmingway, chairman of the Electricity Commission, disagrees, saying that nuclear power cannot be considered an option in New Zealand.

"Although the Electricity Commission has no role in choosing which resource-generating companies build in New Zealand, I believe that nuclear power is the wrong choice."

He says the problem with using nuclear power is not so much related to the possible environmental risks – a stance taken by several other groups – but because nuclear technology is simply too large and too expensive for New Zealand.

"A typical power plant built in the rest of the world is about 1000 megawatts. The average demand and supply of generation in all of New Zealand is about 4500 megawatts, so a nuclear plant would be a very substantial portion of the average generation, which would end up creating system problems."

In particular he says that because nuclear power plants "trip offline" if there is a problem, our power generation system must have a backup generation plan to fill the gap if there is ever an emergency.

"This is difficult enough now when New Zealand's largest single generator is 375 megawatts," he says.

"However, a 1200 megawatt plant – or even a 600 megawatt plant – when it trips offline would require an unreasonably large amount of generation sitting there as a backup. So from a size standpoint, nuclear power doesn't work here."

He also says nuclear power costs almost twice as much to produce as any other form of energy generation currently available and quotes a study undertaken by the Massachusetts Institute of Technology (MIT). In a comparative survey undertaken by MIT, it was found that nuclear power, under ideal conditions, costs 6.7 US cents per hour per kilowatt compared with 3.8 US cents for low cost gas.

Hemmingway doubts, as a result, if any power generating company would step forward and build a nuclear plant.

"New

Zealand lacks much of the technical understanding necessary to successfully maintain and repair a nuclear plant. The nearest nuclear plant to New Zealand is, I believe, in China and that's a long way to call for service."

Keith Locke, a Green Party MP, says his party is against nuclear power but is "happy to debate the nuclear power issue".

He agrees that there are economic concerns about the establishment of a nuclear power facility in New Zealand. But he believes that environmental concerns are the main reason why most Kiwis are against nuclear power as a form of energy generation.

"It comes down to a combination of peace consciousness and environmental consciousness," he says.

"We want a clean, green country, not one that is contaminated with nuclear waste."

Locke says "the long term effects on people and the environment," are the main reasons why the Greens are against nuclear power, but that questions of sustainability also influence their views.

"Nuclear power is not a long term option," he says.

"It may only last one more generation. We really should be going away from nuclear power and utilise the hydro, wind, sea and tidal options readily available to us. We have a great capacity for wind and while there are alternatives available we will not be supporting nuclear power in this country."

Locke also says many of those who support the idea of nuclear power generation in New Zealand do not realise that it will be the taxpayer that pays for its construction and maintenance.

"Nuclear power stations are huge-

ly state-subsidised. They only exist on state handouts and are not competitive with other energy generators in the market," he says.

"I find it strange that the right-wing parties, such as National, support nuclear power as they are meant to want the state out of our lives."

Don Brash said in a speech in July that under a National government any changes to the current nuclear-free legislation would require a public mandate.

While these comments were largely made in relation to nuclear-powered ships entering New Zealand waters, earlier statements by National's spokesman for the environment, Nick Smith, also suggest that nuclear power would be considered by National.

"National supports cost-effective domestic energy policy responses... which support the development of new technology," he says.

While National's comments are ambiguous as to whether they would allow nuclear power generation in New Zealand, Labour's policy on nuclear power is clear.

Energy Minister Trevor Mallard says "the Government is committed to New Zealand being a nuclear-free zone and this includes a policy of no nuclear power stations."

"We are committed to a sustainable energy future for New Zealand and this means having a reliable energy supply that is fairly priced, and is environmentally responsible. I doubt that nuclear power would be acceptable to the majority of New Zealanders."

Regardless of whether nuclear power is acceptable to New Zealanders or not, the very real possibility of power shortages remains.

If nuclear power is not the answer then other sources will need to be found, and quickly.

If nuclear power is, as internationally-renowned environmentalist James Lovelock claims, "the only sensible alternative if we are to sustain civilisation", then that too will need to be explored.

Perhaps it is just as well
Kiwis are nocturnal, as
we may all be living
in the dark sooner
rather
t h a n
later.

