

The New Zealand Herald

Health Story

Pylons major health hazard inquiry told.

Tuesday August 21, 2007 by Simon O'Rourke

Living near high-voltage power lines increases the risk of childhood leukaemia, miscarriage and other ill health, a medical expert has told a board of inquiry.

However, the Ministry of Health and Transpower are comfortable with existing standards and are pushing for "no change" to Government policy.

Auckland urologist Dr Robin Smart presented documented evidence from around the world about ill health effects from exposure to electric and magnetic fields (EMFs) from power lines to a public hearing in Hamilton. On the back of 83 epidemiological studies he appealed for a tightening of current regulations by a factor of 300.



Living underneath pylons has been linked to cancer and other illnesses.
Photo / Greg Bowker

Such a move would have wide-ranging ramifications, the biggest of which could be the scuttling of Transpower's controversial 400KV pylon project on the grounds that it would be uneconomic.

Opponents say the current 65m-wide easement proposed by Transpower is too narrow to ensure the safety of public health. They believe the corridor across 190km of Waikato farmland should instead be expanded to 600m.

Dr Smart, speaking on behalf of anti-pylon lobby group New Era Energy, said the New Zealand standard regulating electric and magnetic field exposure to 100 microtesla was "a joke". He believed exposure should be limited to 0.3 microtesla.

The Ministry of Health and Transpower, along with the Government, were using a standard that was so high that in effect there was no limit on human exposure to power lines, Dr Smart said.

The Government and Transpower were relying on outdated standards, first outlined in 1997 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

(Ndlr Next-up : [Founder-Chairman ICNIRP =... M.Repacholi !](#)).

That standard had been applied poorly by Government decision-makers, he said.

It was originally drafted as a guideline for schools and homes for "short-term immediate health effects such as stimulation of nerves and muscles, shocks and burns ... during exposure to electric and magnetic fields".

But the commission "covered itself" by adding a cautionary note: "These guidelines are not intended to be a complete system to protect the public."

In his submission presented yesterday Dr Smart said the commission's recommendation was "clearly reckless".

"Indeed it is impossible to imagine any human living permanently in a place where there is constantly 100 microtesla.

"It has never been done and is totally unproven as a standard."

International studies of the effects of electricity line exposure were cited by Dr Smart, which showed increased rates of child leukaemia, miscarriage, motorneurone disease, headache, suicide and depression.

A 1997 New Zealand study by Ivan Beale of Auckland University was also quoted, in which 540 Aucklanders living in homes near high voltage lines were studied against a control group.

Exposure to magnetic fields ranged from 0.67 microtesla to 19 microtesla. There were significant differences between the groups in two of ten parameters, relating to memory and self esteem or depression.

Women, in particular, had five times the expected rate of poor self esteem and depression, thought to be due to the longer time they spent in homes compared to men.

Another Auckland doctor, [Laura Bennet, also presented her submission yesterday.](#)

A fetal and neonatal physiologist with a doctorate in paediatric medicine, came to yesterday's meeting as a resident of Clevedon, where towers for the 400KV lines are proposed.

She said the World Health Organisation endorsed a "precautionary approach" principle to the issue of EMFs. WHO placed most emphasis on guidelines to protect vulnerable populations such as pregnant women, unborn babies, and children.

"The precautionary approach says we design these lines to take account of present and future health risks, including those where the science is still being investigated, at whatever cost is appropriate to mitigate these risks".

On the other hand, the "prudent avoidance" approach, favoured by Transpower, determined that if something could be done to reduce impacts at little or no cost, effects could be mitigated.

But there was no obligation or regulatory constraint. "This is why we continue to see houses built close to or under power lines," Dr Bennet said.

The National Radiation Laboratory, for the Ministry of Health, said in its submission it supported a Ministry of Environment's evaluation on the topic.

The evaluation said electric and magnetic issues were often raised as a health concern by the public when a development or upgrade to the electricity transmission network was proposed.

The international guidelines were "well established and widely recognised", and provided a basis that gave confidence to the public. It also ensured decision-making was consistent and based on recognised science.

Transpower said any new policy should not be arbitrarily lower than the ICNIRP guidelines, and should be reflected only as a guideline and "not a mandatory standard".

Hundreds of South Auckland households are exposed to electricity transmission lines, with scores of homes built directly beneath them.

While the inquiry's major aim is to eliminate the need for Transpower to gain resource consents for minor activities on its grid, another is to review policy over what are acceptable levels of electric and magnetic fields.

Earlier this month Energy Minister David Parker said a "possible" outcome was the setting of an environmental standard on exposure levels.

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