

Smart meters get the safety nod

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New research dispels concerns that electromagnetic radiation emitted by wireless smart meters poses a health threat.

Researchers at the University of Canterbury have found that wireless radiation from smart meters falls well within the New Zealand safety standard for general public exposure levels and is far below the level often encountered from cell phone use.

Dr Bill Heffernan, Principal Engineer at the Electric Power Engineering Centre (EPECentre) in the University's College of Engineering, said the findings of the study vindicated the use of smart meters from a health and safety perspective.

“Essentially, the research has shown that smart meter emissions fall well within the New Zealand standard and international standards. In terms of radiating devices, exposure from smart meters is significantly lower than that from typical cell phone use.”

The EPECentre was commissioned by Arc Innovations to perform an independent, science-based study of the health and safety aspects of smart electricity meters when it became obvious that members of the general public were developing concerns that smart meters may present a risk of adverse health effects.

The study investigated all known smart meters and systems currently deployed in New Zealand. The research found that radio frequency-mesh (known as RF-mesh) deployments radiate much less power than allowable limits and that cellular deployments (commonly called GPRS) transmit data similar to phone texts at the same RF radiation levels as a mobile phone, but are generally much further away from the body than a mobile phone.

“Both these types of smart meters can be shown to cause considerably less exposure to radiation than typical mobile phone use, especially when people are at least one metre away from the smart meter,” said Dr Heffernan.

“It is much more likely that we would spend an hour or so a day talking on the mobile phone or working within one metre of our wireless router or laptop than standing within one metre of our smart meter. New Zealanders should feel reassured about the safety of having a smart meter installed in their meter box, given these findings.

“Smart meters have been in use in New Zealand for the past six years or so. Deploying smart meters throughout the country provides a real chance for the electricity industry and customers alike to change the pattern of consumption to maximise use of renewable energy

(e.g. solar, wind and hydro), while minimising use of fossil fuels and overall energy, reducing the need for extremely expensive and unpopular grid upgrades, such as new transmission lines.”

The EPECentre (www.epecentre.ac.nz) is dedicated to excellence in electric power engineering education and research and has many members from the electricity industry, including generators and retailers, distribution companies, consulting companies and contractors.

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