Safe ICT NZ

Safe Information and Communications Technology for New Zealand

Newsletter January 2023

You opened our newsletter, that's fabulous

Thankyou, We promise we do not take your attention for granted. Our aim with these newsletters is to inform ourselves, as well as share news. A big welcome to all of those who ticked yes to our newsletters at the Go Green Expo. Having alerted you to some of the biological and ecological issues, we want to give you some of the tools to protect yourself and the eco system in this newsletter. But first we need to face the fact that there is a—

Hulking elephant in the room.

The issue we need to face is that when you look online for detail of cell-phone and wireless (ie non-ionising radiation) safety, you may have looked up the NZ Ministry of Health's website. If you did you will have found this statement "**These reviews conclude that, overall, the results show that exposures which comply with current limits do not cause health effects."** And so you may think—oh well, cool, nothing to worry about here (sigh with relief) and practise no restraint because—hey, our devices are so convenient and we are all a certain amount addicted. But stay with us because—its only half of the story.

The other half of the story is missing

This statement by the MoH is a rewording of the statement (made by a group that the MoH relies on for our standards) which is: "Results of these studies to date give no consistent or convincing evidence of a causal relation between RF exposure and any adverse health effect." The second half of the statement is often missing: **"On the other hand, the studies have too many deficiencies to rule out an association."** The conclusion continues on, drawing a list of unknowns including chronic exposures and the additional risk to children. ***…Ahlbon A, Green A, Kheifets L, Savatz D, Swerdloa A, Epidemiology of Health Effects of Radiofrequency Exposure, Environmental Health Perspectives, Vol. 112, Number 17, pp 1741 - 1754, December 2004.***

The statement was made back in 2004. Each year in NZ a group organised by the MoH called the Interagency Committee is charged with monitoring the new science in this field to detemine if there are changes that need to be made.

This group is not made up of experts in the fields of electomagnetic biology, and they rely heavily on the International Committee of Non-ionizing Radiation Protection (ICNIRP) for reviews of the science and for our standards. It sounds all well and good and they (ICNIRP) have affliations with the World Health Organisation also. However there is a big BUT, the size of that sizeable elaphant's BUTT in the room, and that is that under a facade of rigorous science the ICNIRP committee's non-ionising radiation guidelines use a lower evaluation of risk than used in the chemical toxicology!

Before the MoH adopted the ICNIRP's standards, they were warned exactly why not to by Professor Neil Cherry. But they went ahead and did so regardless.

Dr Cherry warned the MoH that if non-ionising radiation was a chemical, it would already be classified as toxic, cancer-causing, genotoxic (DNA damaging), teratogenic (causing severe reproductive problems), and changing the parameters of white blood cells in the blood, reducing the effectiveness of the immune system, making the body more subject to allergens, viruses and toxins.

"The observation that ionizing radiation can ionize atoms, produce free radicals and hence damage DNA, was incorrectly taken as assurance that non-ionizing radiation, which could not ionize atoms, must by this very fact, be benign" says Dr Cherry. https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/4017/icnirp-cherry-critics-en1.pdf?sequence=1

ICNIRP is the subject of two reviews by the European Union detailing it's members' industry allegiances. ICNIRP's research reviews ignore all of the science on wildlife harm, of which there is extensive evidence. https://www.frontiersin.org/articles/10.3389/fpubh.2022.1000840/full

Regarding the statement of safety when complying with current limits—our standards are all about preventing heating tissue. ICNIRP presumes that there are no biological effects if EMF exposure is not heating tissue.This Health and Safety Executive UK (HSE) report includes a table of the studies of biological effects: https://www.ofcom.org.uk/__data/assets/pdf_file/0019/62515/cavi_society_attachment.pdf

The studies include things like altered brain waves as evidenced by EEG studies. But to ICNIRP if there is an effect, then the exposure must not comply with the safety standards, not if there is an effect then the safety standards are wrong. (In the 30 million dollar NTP study the review by ICNIRP thought the exposures must be heating the rats and therefore they couldn't possibly be using their themometers properly.)

Also ignoring the evidence is the American Federal Communications

> The fundamental methodology of ICNIRP is wrong. It applies high levels of scientific rigor to individual epidemiological studies or laboratory studies, finding any shortcoming as an excuse to dismiss the whole project.
>
> —Dr Neil Cherry

Commission (FCC) who were recently ordered by the Federal Court to relook at the science they were ignoring. The court determined that the FCC had failed to provide a reasoned explanation for their determination that current guidelines adequately protect against harmful effects of exposure.

In the court case 27 volumes of peer-reviewed science were submitted as the evidence of what they were ignoring.That was about a year ago. We have yet to see any action by the FCC. https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/

Can you get your cell-phone use down to under 17 minutes a day ?

There is a hazard with any cell phone useage, like there is risk in simply driving a car. Driving at high speed ups the risk considerably and so does daily lengthy calling and using your phone for accessing the internet.

Last year Joel Moskowitz, researcher in the School of Public Health at UC Berkeley and director of Berkeley's Center for Family and Community Health, updated the review of the science. He says "Our main takeaway from the current review is that approximately 1,000 hours of lifetime cellphone use, or about **17 minutes per day over a 10-year period, is associated with a statistically significant 60% increase in brain cancer**".

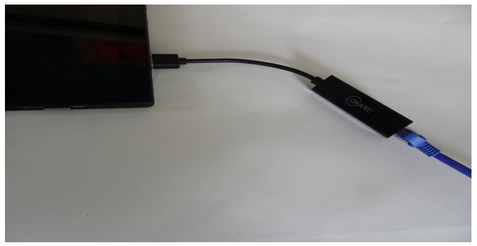
So, keep your mobile phones use to really important calls and return to a cabled landline—not a cordless phone. Yes, you can still buy them. Use an ethernet cabled computer to look up the weather, who is winning the rugby, message, watch your friend's Insta account, and of course see those cute cats.

If you don't have a computer at home, but you have fibre to your home, you can actually use the internet from your phone via ethernet using an adapter that connects the ethernet to a usb port! See our next article—

Use your cell-phone and laptop wired!

Plug-in your adaptor, plug in your ethernet cable and GO

There are eight big advantages when you hook up your laptop and/or your mobile phone to the ethernet



1. **No toxic radiation exposure:** How cool would it be to find some daily health issues eliminated by reducing exposure? We think it is worth exploring for yourself if issues such as insomnia, headaches, nose bleeds, irregular heartbeats, fatigue, brain-fog, depression, high blood sugar, and children's difficult behaviour, resolve themselves by cutting exposure right down.

2. **High speeds:** billions of bytes per second instead of millions of bytes per second. (Ethernet:10 Gb/s, if you have a Cat6 cable, more for higher number Cat cables versus Wi-Fi maximum of 866.7 Mb/s and 150 Mb/s) *Note this may be compromised by your provider's network settings and the plan they have you on. Compare: For a 5 gigabyte file on a 100Mbps plan it's only 6 minutes to download or 40 seconds in parts of the country that have ultrafast broadband. Whereas on 4G wireless it will take 75 minutes downloading on wireless and 7.5 hours uploading.

3. **Reliability:** signals won't fluctuate, or drop off based on interference. With Wi-Fi your microwave oven won't kill your internet.Other Wi-fi networks can interfere causing lost packets of data. Every wireless device has a small negative impact on all the others. Ethernet devices do not (or very rarely) interfere with each other.

4. **Lower latency:** (or lag which is the length of time for data to get from a device to its destination), so less interrupted video calls.

5. **More security:** Hackers can eavesdrop on private emails and even distribute malware using an unsecured.Wi-Fi connection. Ethernet connections are less easy targets.

6. **Less energy use:** that is less use of the battery on your phone, but also realise that wireless network communications systems are an energy monster. The

Melbourne Centre for Energy-Efficient Telecommunications (CEET) repeatedly makes the point that "90% of additional energy for cloud computing is from wireless access network technologies, versus the 9% of energy use for the data storage centres". Disturbingly, the CEET calculates our increased use of wireless network technologies as equivalent to adding millions of cars on the road. From 2012 to 2015 we increased our usage by 450 trillion watts per hour. **https://ceet.unimelb.edu.au/publications/ceet-white-paper-wireless-cloud.pdf** Wireless traffic over 3G uses 15x more energy and over 4G 23x more. https://gettingsmarteraboutthesmartgrid.org/wires.html.

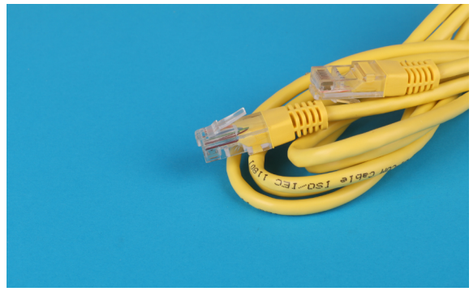
7. **No Jitter:** Wi-Fi packets can arrive out of sequence. This causes things like screen images to be glitchy and flickery and adds unwanted audio signals.

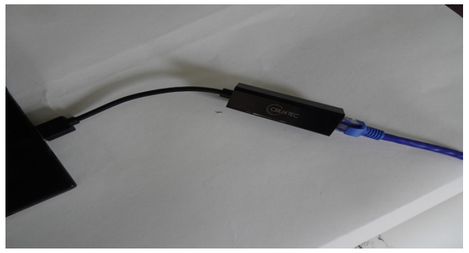
8. **Consistent speeds:** With ethernet the data flow is solid from end-to-end. With wireless, waves weaken with interference and over distance. Ethernet can send and receive, upload and download simultaneously.For Wi-Fi these processes happen in turns, with a little time difference.

If you have fibre to the house all you need is two 2 things:

1. An ethernet cable (with a common RJ45 jack). These are approximately NZ$20 for 20 metres)

2. An ethernet to usb adaptor that fits your phone's USB port (from $NZ35 onwards depending on brand and other features like built in charging). iPad and iPhones will need a lightening connector. Most new androids will use USB C, which is the little oval shaped connector that's flippable (you can't put it in the wrong way round). Older Androids will use micro USB (the tiny, skinny one).





Adapters: These are fairly common, and have geek cred because they get higher speeds from mobile phones and mobile devices.You can buy them off the web or from tech stores. Before you go to the store check three things:

1.that the store has one that has the right USB connector for your port

2. That the adapter does support your particular device.

3. Your cell-phone phone isn't too old. Your phone must be running Marshmallow 6.0 operating system (introduced 2015) or higher.

So turn off your wireless settings (mobile data, Wi-Fi Bluetooth, auto updates, and roaming), plug in and play. On some phones just go to the flight mode and it will do it for you.

Load a browser up. It will tell you that you have no internet connectivity. Then plug in the adaptor to the phone, and the ethernet cable into the adapter and router port, then look out for an ethernet symbol, (three boxes connected to a single line or line between arrows or similar) on your phone and your browser window.

You cannot make cellular calls but you will be able to do the things you use Wi-Fi for, with some exceptions. There are some software apps which are set up for Wi-Fi or cellular connectivity and don't recognize ethernet connectivity.

Even though your have reduced the radiation by use of an ethernet cable, the mobile phone will still be emitting magnetic fields, which have an effect, so still try to keep it away from your body.

Don't expect a long life out of the adapter. Unfortunately they have about the same life as a phone charger cable.

Previous analysis and current debate on making cloud services more energy efficient is misplaced on data centres and ignores the massive energy impact of wireless cloud growth.

Why is a old fashioned landline better?

A corded landline with a traditional handset is the better option because it has higher quality voice transmission. It is easier to use safely, holding it right to your ear without EMF exposure. You do not want one with a keypad in the handset, you do not want electronics near your brain. Do not get confused with cordless landlines here. A cordless phone is worse than a cell phone, with radiation coming from both the handset and the base, with the base emitting 24/7.

You may be surprised at how cheap a traditional landline is, especially if you are on a bundled plan. In an emergency even if the power is down your corded phone is the most safe option, because telephone companies are required to have a separate power system (this harks back to when telephones rolled out before electricity in some places). Because a landline phone is connected to an actual address, in an emergency you are in a better position to be found.

Helpful stuff on our website about converting to wired technology

We have a video on our website showing the simplicity of connecting an iPhone to the ethernet https://www.safeictnz.org/how-to-protect-yourself. On another page on our site there is a bit more detail on going wired, explaining types of cables so you can choose them with confidence and, importantly, step by step instructions on how to turn the Wi-Fi from your router off on the internet: https://www.safeictnz.org/connecting-ethernet-cables

Safer online: think pass-phrases not passwords

"Panasonic microwaves create micro waves to superheat soup"

"Vestigial hamburgers slide gracefully from McCoy"

"I LOVE to Read WeLiveSecurity!"

These are some examples of great passphrases.

A question was asked at the Go Green Expo about whether a 16 character pass word was long enough? Kevin Mitnick, a former long-time hacker, now security expert from KnowBefore4 https://www.knowbe4.com/ suggests 20-25 characters and to think of passphrases instead of passwords.

There are two basic rules which will protect you much better online:

1. The longer the better.

2. ALWAYS use a different passphrase for every different website.

Yes we know it is a complete pain and most of us, even experts, resist these "usability challenges".

Even if we do make changes, often we just change the front and back of our favourite passwords, making us fair game with a single password breach for the hacker programmes that will try guessing based on this and the habits we all share, like putting the capital letter at the front of our password and using a standard sequence of numbers at the end.

While there are apps to record your password/phrases these do have some vulnerabilities.

Have fun with your passphrase you are more likely to remember it

Experts do one other thing we don't tend to do and that is they change their password/pass-phrases often.

Regarding pass phrases; use a sentence structure, otherwise it is too difficult to remember. Who is going to get the order right with; "hotdog food ketchup relish mustard mayo"? "outofthepark" is too common, Add in real names or non-dictionary slang terms. One way to do it is to think of things seen in a memorable trip.

What do you notice that is different about the passphrase examples at the beginning of the article? For a start there are spaces used. Who knew they could be used? Not this writer. Also, the capitals are not simply at the beginning of the password/phrase. There is the inclusion of a real name, and the capital letters are not simply put at the beginning, there is also an exclamation mark. There is also a bit of silliness which is more memorable.

5G Rollout

Here in New Zealand (and also in Australia) instead of paying for the spectrum frequencies used for the 5G rollout at auction, our three major mobile network operators — Spark, 2degrees and Vodafone — will be required to increase the pace of the 5G rollout to small towns across rural New Zealand. The most worrying 26 Ghz ie mm-sized band is currently not being used as yet.

We agree with Minister Clark that rural communities' lack of high quality internet needs remedying. There are huge financial impacts and poor internet service does create a digital divide.

Forcing wireless services on farmers is giving them the short straw — particularly when you factor in that cows appear to be even more sensitive to radiation than humans. The human body has an electrical resistance of 1,500 Ohms, while the cows can get as low as 125 Ohms, https://strayvoltagefacts.com/resistance#:~:text=The%20research%20shows%20that%20the,measured%20mouth%20to%204%20hooves. Not to mention that they are not separated from the ground by rubber soles and may be standing around in muddy urine pools.

Recently in France 4G towers were ordered to cease transmitting for several months while farmers' claims of cows' ill health in proximity to new towers are investigated further. The farmers' experience is that the cows' milk production lowered by 100's of litres, dropping 15-20% within days of the antennae being switched on.

The animals fed and drank less, becoming skin and bones and eventually one quarter of their 200 herd of cows died. "We have had 40 dead cattle in a timespan of 11 months, as opposed to ten or so in normal times," Frédéric Salgues told Le Monde. "There are very disturbing phenomena in terms of animal behavior with animals that do not eat or

drink," Julien Bachellerie, director of the Haute-Loire Health Defense Group, an association that monitors animal health, told Le Monde. "We've looked at all the usual hypotheses and haven't found any that stand out. The quality of the food or water, the breeding methods, the presence of diseases... nothing could be pointed out. And the autopsies did not reveal anything."

This is not a unique event. Another example is in Ohio where the cows also lost weight and calves have been born with tumours inside of them, in 800ft proximity to a tower. https://www.earthisland.org/journal/index.php/magazine/entry/warning_high_frequency/

One of the reasons for the cows' decline has some science papers behind it. Cows have been found to have low levels of the hormone melatonin in proximity to cell towers. Melatonin acts as a very powerful free radical scavenger; cleaning up free radicals protects cells and tissues from reactive oxygen damage. https://stopsmartmetersau.files.wordpress.com/2011/10/convincing-studies-and-anlysis-of-adverse-effects_health.pdf

Dr Timothy Schoechle's report Re-Inventing Wires

Veteran telecommunications expert Dr Timothy Schoechle questions the reasoning behind the push for 5G, "Before building out a massive wireless infrastructure to support the IoT, including new and untested 5G millimeter wave antennas, it may be worth considering to what extent a trajectory of technological development driven by the imperative to increase sales of silicon chips, software, and data will likely result in a reasonable provision of consumer satisfaction and [act for] the broader social good."

He notes that the basic motivation driving 5G is about tech jobs and careers; summed up by Professor Anthony Chan of Huawei Technologies "...if technology does not change the company will die, people must buy a new phone".
5G is presented as a solution to the problems of limited science and engineering career paths that have been created by corporate concentration and globalisation.

He asks "Are present ambitions in the technology sector for an Orwellian control the ambitions for a better society? The discussion on this within government appears to be captured by those who want this".

"...The network performance demands of IoT in control and sensor applications are very light compared to the demands of video, advertising, and data collection applications that are claiming to justify creating 5G." says Schoechle

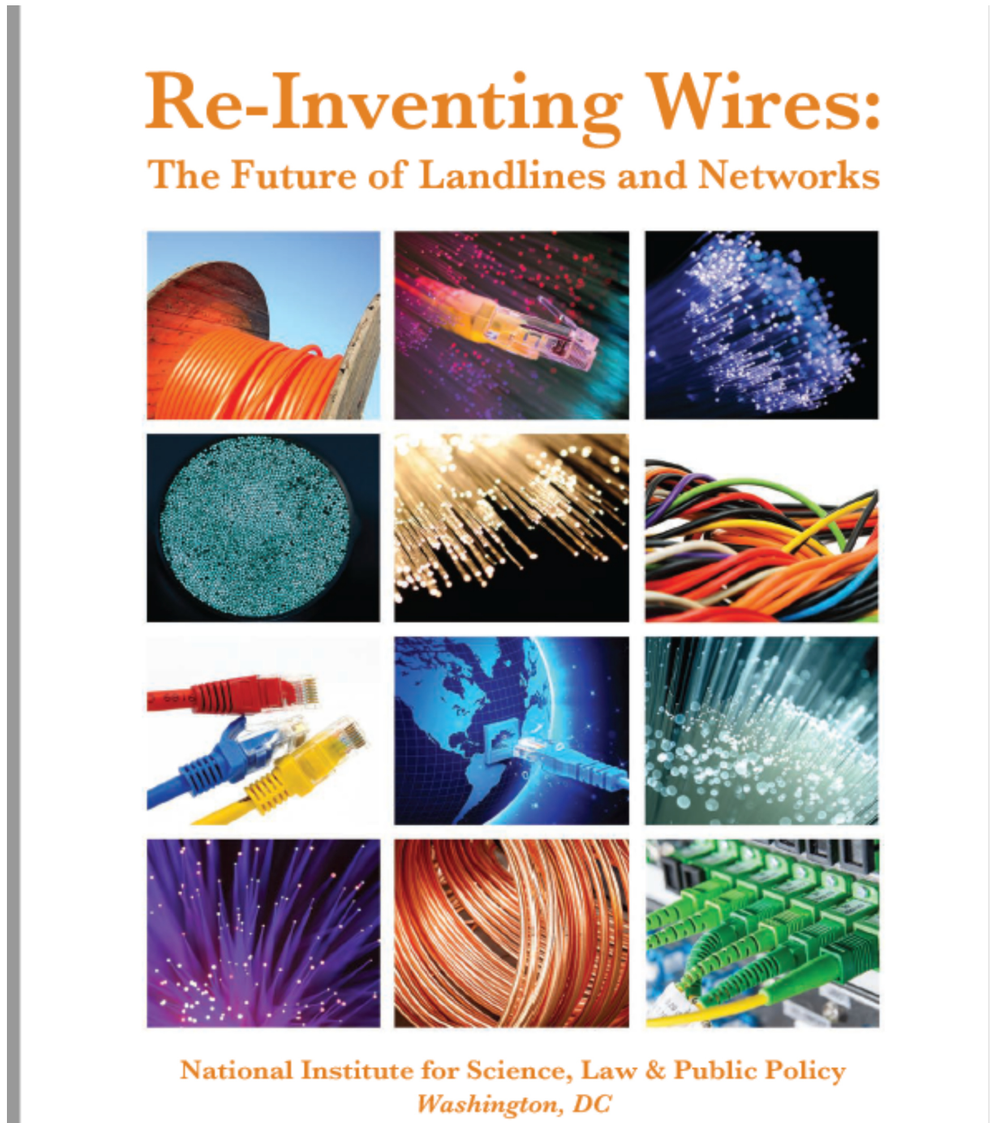
He raises questions about:

Ownership in the digital age and public commons

Let's talk about purchasing software and hardware that later become unsupported or 'bricked', or accelerate their costs when we have reliance on them.
"Which hardware will Google choose to intentionally brick next?" ... "If they stop supporting Android will they decide that the day after warranty expires your phone will go dark? Is your Nexus device safe? What about your Nest fire alarm? What about your Wi-Fi video monitor?"

Public Commons

Should, like water and electricity, wired internet access be part of the public commons? Should it be available to all citizens at the same speed, accessible to all, and not subject to private providers



and corporates' preferential service, or imposed business models, or imposed gateways to access of information?

Landline legacy and its value

"The existing wired infrastructure, including copper, is basic infrastructure—a public good, and a public right-of way—that needs to be preserved and maintained. Dismantling a decades old infrastructure should be prohibited. Private, for-profit business interests should not be allowed to abandon or destroy this national and community asset."

Because of our technical ignorance we don't realise that the large networks of copper wire and state-of-the-art fibre are really the health-safe communication

The internet is the medium of public discourse. Should availability, quality, content, and media of high-speed access, be a public commons or a tool for corporate commerce?

system of the future. “Contrary to industry claims, copper landlines are not obsolete, but can outperform wireless by employing new VDSL or G.fast signaling technology, Schoechle claims. https://gettingsmarteraboutthesmartgrid.org/pdf/Wires.pdf

What are VDSL and G.fast?
VDSL or G.fast systems connect fibre to an existing copper line. Copper is affected by distance, whereas fibre isn’t, hence the combination of the two.

VDSL is used in New Zealand. VDSL stands for Very high-speed digital subscriber line, and it delivers at a rate up to 130 Mbps and 10 Mbps upload. Chorus can deliver VDSL services to properties located up to 1.2 km distance from the local cabinet or exchange. G.fast is faster still but not adopted in New Zealand. G.fast is a standard that is used only for distances of up to 500 metres. It converts from a fibre distribution point to already available conventional twisted pair copper line (DSL), and then converts to ethernet at the premises. This use of a copper tail with fibre lets network operators bring the speed of fibre to copper lines, clearing the path to lower cost ultra-broadband delivery services at Giga bit speeds, without a lot of new trenching work if the copper is of good standard.

Because the G.fast technology is principally designed for comparatively dense urban areas and because it also requires electricity for its networking devices whereas fibre doesn’t, in New Zealand G.fast was ruled out in favour of VDSL in the short term and in the long term fibre to 80% of the population and keeping it simple. https://www.geekzone.co.nz/forums.asp?forumid=49&topicid=177516

Chorus states on their website: *“If you're in a rural area where fibre is not available today or planned for anytime soon, we'll be ensuring the copper network will remain in these areas so you can continue to access landline and broadband services.”*

This is good to hear, and Chorus is doing an excellent job getting fibre rolled out. However, the compromise of not having a reliable landline, as we had in the past, when the electricity goes down is a big problem.

Spark announced an additional 35 million dollars investment in the 5G rollout, and similarly One NZ (ex Vodafone) is spending big bucks, but they need us to use their services to pay for this.

Maybe we would prefer our money to be used for a fully publicly owned, safe, much more energy efficient, capped-cost system?

Read our submissions to Digital Communications Minister David Clark on our website

We have corresponded on the fact that not only is the underpinning of our regulatory system (ICNIRP) not independent, but the statement made by Clark that limits would be influenced by health research is patently not happening.

We recently submitted a seven-page fully referenced letter (along with backing research papers and EU reports). See it here: https://www.safeictnz.org/news (give the website a little time to load the PDF viewer).
We noticed that an update appeared on the MoH’s website placing less emphasis on the reliance on ICNIRP and more towards the Interagency committee.

The reply we received stated:
“In regards to the operation of the ICNIRP, as I stated in my previous correspondence, I have no reason to doubt the independence of the ICNIRP. Based on the makeup and operation of the ICNIRP, and the fact that there is an interagency committee that considers how to apply it to a New Zealand context, I am comfortable with the processes in place”.
—Hon Dr David Clark. 8 November 2022
It was a disappointing reply which didn’t try to refute the many points we made, but we cannot say it surprised us.

Go Green Expo quiz prize

The quiz participant cash prize was drawn by using an excel random number generator and went to Brian who lives in Owhiro Bay. Thanks everyone (more than 180 people) for taking part.

Get delight from your giving

"Donating anonymously to an organization, will still bump up your life satisfaction more than if you held onto the money." —Jim Rohn.

We managed to go to the Go Green Expo using a generous donation from a member, but we would need further donations this year to do a repeat performance.

We would love it, and you would get that mood boost if you manage to give us a little.

On our site there is a secure (Stripe) donation page. Scroll down from the SUPPORT US title on the menu on our website safeictnz.org for the page. Every little bit helps: if everyone who reads our web pages was to donate enough to cover the printing of one car sticker, we would be able to do another event like the Go Green Expo, or to continue to advertise our website in magazines etc.

If any members have some great or fun ideas about how to raise money for the society, do so.