

Property owners and telecoms liable for non-thermal harm

A German court clarified that property owners who rent space for base stations are responsible, with the telecom operators, for any health effects, including non-thermal harm where the radiation is lower than heating standards such as ICNIRP's.

Human magnetic sense is established.

(Chae K-S et al., Sci Rep, 2022)



Warning signs for masts

Mean levels in the centre of Columbia, a city in South Carolina, USA, were 1.24 V/m. International long-term limits are 0.03 V/m (children, Bioinitiative). The study recommended all 'close proximity transmitters should be labeled with relevant signs to warn of high RF exposure in the area ... so that people who need to limit their exposure have been given a chance to do so.'

(Koppel T et al.: World Academy of Sciences Journal, 2022)

UKHSA should refute 'safety' lies

Government 'lies' have been in the media recently. Some groups still follow Schwan's invalid 1953 heating myth claiming that RFR/5G is 'safe', despite 3 studies so far in 2022 confirming that EHS exists and that 5G can cause EHS symptoms. UKHSA must refute lies that RFR/5G is 'safe' and follow the mainstream science from 1733.



Electric field levels and limits (V/m)			
Background	Safe	Nature	0.0000002
External electric fields change active cell membranes			0.0001
Protective Bioinitiative	Long- and short-term, non-thermal and heating	Scientific limit	0.03 - 0.05
Columbia, USA: outdoors mean			1.24
Unprotective ICNIRP	Short-term only, heating only	Arbitrary limit	123.0

Cows' deaths: switch off 4G



A French court ordered the switch-off of a 4G mast after 40 out of 200 cows died and milk yield fell 15% to 20%.

'Junk' and 'flawed' science

Some industry defenders rely on what experts call 'junk' or 'flawed' science. The Oxford 'Million Women' study combined users and non-users as never-users or controls. A 'junk' study in JAMA Oncology was by a Vodafone video spokesman who even claimed, without scientific proof, that RFR 5G, a 2B carcinogen, is 'safe'!

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ES-UK NEWS

Excellent letters and emails

Congratulations to supporters who write such excellent letters/emails to their MPs, local councillors, government departments and the media. They can all make a difference.

UKHSA/DHSC knowingly allow suffering

It is extraordinary that in 2022 the UKHSA and Department of Health and Social Care knowingly flout the Health and Safety 1974 and Equality Act 2010. They allow the ever-increasing levels of suffering caused by RFR/EMFs because they follow the industry reliance on ICNIRP and its thermal lie based on Schwan's myth of 1953.

The UKHSA/DHSC need to follow mainstream science and not lies.

Even the ICNIRP in 2002 accepted the mainstream view that governments need to adopt non-thermal guidelines, but ICNIRP has not yet done so in their 2020 guidelines.

Thank you for your gifts

Your gifts support our website, telephone helpline, mail box, leaflets and media information.

Enhanced Website

This now boasts a background of beautiful Derbyshire, thanks to our website designer.



ES NEWS AND ADVICE

'Electra' – a film about suffering from EHS

Electra is a normal girl but suddenly begins to suffer headaches, loss of balance and disturbed sleep. A doctor appears unaware of EHS and immediately assumes that her symptoms are caused by anxiety. Electra is played by Lisa Granuzza Di Vita who suffers from EHS. (Italian with English subtitles, 22 minutes, director Alessandro Quadretti, produced by Officinemedia for Associazione Italiana Elettrosensibilità, July 2022. [Link](#).)



Debra's list of what to have ready

Everyone with ES should have an Emergency Hospital Bag with ES-UK letter by Dr Tresidder, leaflets, Austrian EMF Syndrome forms, magazines, meter, shielding fabric [pieces large enough to cover you in bed], shielding clothes, EMF books. And find out if your local A&E hospitals have Wifi.

Some U.S. fibre optic cables and ES

Jeromy Johnson's American perspective on possible ES problems with fibre optic cables: <https://www.emfanalysis.com/fiber-optics-increasing-electrical-sensitivity/>
<https://www.emfanalysis.com/low-emf-internet-connection/>
<https://www.emfanalysis.com/why-gigabit-routers-create-emi/>

EMF podcasts

Nick Pineault has podcasts on EMF topics: <https://theemfguy.com/smarter-tech/>

RICKY GARDINER 1948-2022

All at Electrosensitivity UK express their sincere condolences to Rick Gardiner's family and friends. We are grateful for his clear comments about what ES is and how much it limits ordinary life.



Photo by Virginia Scott, *Let it Rock*

The guitarist Ricky Gardiner was born on August 31 1948. He died of progressive supranuclear palsy on May 13, 2022, aged 73.

"He was diagnosed with electrosensitivity in 1998, which made him feel unwell when in proximity to electronic devices – he had to adapt his home studio to accommodate the illness."

(Ben Beaumont-Thomas: "Ricky Gardiner, guitarist for David Bowie and Iggy Pop, dies aged 73" *The Guardian*, May 17 2022)

"In 1997 Gardiner was found to have electromagnetic hypersensitivity, which he put down to years of exposure to computer radiation and magnetic fields. From thereon he stayed 5m away from electronic equipment but he continued to collaborate with his wife in the studio, directing operations with the aid of opera glasses."

(Anon.: "Ricky Gardiner: Cerebral guitarist who composed the famous riff on *The Passenger* for Iggy Pop and played on Bowie's seminal album *Low*" *The Times*, May 20 2022)

Ricky Gardiner on Electrosensitivity, 2006

I contracted Electrosensitivity as a result of working for nearly 10 years in an environment so disposed that eventually I was surrounded by 14 computing devices within arms length. Towards the end of this period I caught a viral infection (shingles). I continued to work while infected. Perhaps this left me open to attack, since shingles is connected with the nervous system. Or it may have been connected to the anti-viral drug which was prescribed by my doctor to help to combat

the infection. It was after this drug that the symptoms worsened. My doctor read out to me a list of about 13 known side effects of the drug. I had all of them except the last two 'coma' and 'death'. I am grateful for small mercies.

Whatever the exact cause, there are thousands of people like me throughout the world and over 90% of these people 'know' that their condition was caused by the 'computer'.

What restrictions does my condition impose? I cannot go near television, computers, CD players, FM radio, fluorescent lights, microwave ovens, mobile phones, induced magnetic fields, power supplies (switched mode) or any modern device using intelligent control ie washing machines, modern cars (petrol or diesel). I cannot go (without becoming ill) into shops, garages, doctor's surgeries, hospitals, other people's homes (unless detached and all offending appliances are turned off) and commercial premises of any description, or institution. Such places are full of fluorescent lights, computers, TV's, video's etc. It also means I cannot travel by air or sea, for the same reasons.

Above all I cannot go into a recording studio so I have spent years endeavouring to adapt my own studio so that I can try and work to some extent. This process goes on.

I would recommend that all people working with computers have regular breaks, regular fresh air, open windows, cut down watching TV, not play computer games, get rid of fluorescent lights, treat microwave ovens and mobile phones with caution (never use them in a car – the effects are multiplied). Sip water after exposure to computing devices. The problem lies with the cumulative effect of the multitude of devices which abound today. Once your threshold is crossed there is no return. Once the sensitivity is raised you are stuck with it.

I have had it for 11 years. I know people who have had it for 13 years. Pay attention to what your body is telling you and believe what it says. <https://rickygardiner.com/electrosensitivity/> [DailyMail-Nov.23 2014](#)

BT pauses digital rollout

On March 29 2022 BT paused its switch-over from landlines to fibre optic cable. It aims to complete this switch by 2025, but admits it had not thought through problems from a power cut, when mobile phone masts and fibre will not work for emergency calls. People were left without landlines following Storms Arwen and Eunice and a man's home burned down in Scotland because he had no mobile signal and could not call 999.

Access for Care Alarms also need to be resolved.

(Fiona Parker: "BT throws lifeline to landlines as bosses suspend digital rollout after customer backlash" Daily Mail, March 29 2022)

Daily Mail letters on landlines for people with ES

"My elderly Mum loves to chat and her landline was invaluable during the pandemic. My son has electromagnetic hypersensitivity, so can't have wifi in his home. The landline is his only connection to the rest of the world. There are millions of people who would prefer to be left alone with the technology that they are used to and feel safe with." - Teresa Bence, Bridgend.
"I agree with Dame Esther Rantzen that the scrapping of landlines has not been thought out regarding older people and the vulnerable. I am electrosensitive so would react badly to a digital line. Would people like me end up with no phone at all?" - June Cain, Ruthin, Denbighshire.

(Debate: "Is the proposed axing of landlines by 2025 a betrayal of the most vulnerable?" Daily Mail, March 29 2022)

Vodafone's street-level 2B cancer units



Vodafone is fitting miniature 4G masts on a phone box in Winchester. The old Vodafone 3G network will end in 2023. The DCMS cut regulations to make it easier for mobile masts to be attached to public infrastructure like streetlamps, traffic lights and phone boxes. There are similar antennas on phone boxes in Brighton, Edgware, Edinburgh, Guildford, Harrow, Oxford and Polzeath and Sennen Cove beaches.

(Frankie Rudland: "City residents to be handed signal boost through new 4G phone box" Hampshire Chronicle, March 7 2022)

Vodafone mini antennas

"Our engineers can install antennae into phone boxes, store fronts, manhole covers [right] and other street



furniture." Vodafone 'nest' box

("Mobile phone masts: Everything you need to know" Vodafone, September 29 2021)

Cheers as Frome rejects 5G mast

Cheers and shouts of "we love you!" echoed around Mendip District Council's planning board meeting in Shepton Mallet, Somerset, on Wednesday evening, March 16 2022, as plans for a new 5G mast were narrowly refused. Members were evenly split but chairman Damon Hooton used his casting vote to turn the plans down - prompting rapturous applause from members of the public who had turned out in person. Dr Erica Mallery-Blythe said the plans should be refused since the existing safety guidelines for cellular towers were now "obsolete". The evidence of RFR's carcinogenicity has elevated substantially since 2011. Experts are calling for this now to be designated in the same bracket as tobacco and X-rays." Francis Hayden, a retired physics teacher, argued 5G signals were not capable of causing cancer - a position which prompted heckles of "not true" from the public. [Since 1945 RFR has been shown to cause cancer at non-thermal levels. Non-ionising radiation can cause DNA breaks just like ionising radiation - Ed.]

(Daniel Mumby: "Plans for 5G mast on Grove Lane and Manor Road in Frome refused" Somerset County Gazette, March 18 2022)



Houston rejects 5G mast

Renfrewshire Council rejected plans for a 20m 5G mast in Houston, 70m from an existing 20m 4G mast. Councillor Alison Dowling, said she was disappointed at Hutchison's appeal: "It gives the impression of trying to undermine public scrutiny."

(Stephanie Brawn: "Appeal lodged after council rejects plans for 20m-high 5G mast in Houston" Daily Record, January 16 2022)

ES EXHAUSTION

What's changed? ES difficulties of work as 'collateral damage'

A qualified building surveyor in the UK, with a relevant degree, contributes his feelings on why he needs benefit support after years of gaining employment but being failed by numerous employers. The Department of Work and Pensions needs a doctor's note. This is a response to his GP's request to know what's changed.

Why a doctor's note now? What's changed?

Not really a question of what's changed.

Perhaps it's more akin to a long-awaited epiphany. The straw that has sat upon the camel's back for years has finally brought the camel down.

I've been struggling on for years in terms of employment. I have fallen down 10 times and got up 11, over and over again, as my CV (curriculum vitae) shows. I have always approached and undertaken work with a high level of skill, enthusiasm and integrity, only for my efforts to be disregarded in favour of prejudice and discrimination once my long-term illness has reared its head. Moreover, when I have asked for help and understanding, I have always received the opposite and rather spuriously been shown the door not long after.

'fallen down 10 times and got up 11'

To have been treated this way has left an indelible mark on my psyche, a form of post-traumatic stress disorder (PTSD). I feel angry / sad / cynical and do not wish to be treated like this anymore. Such feelings are amplified in a work setting where EHS becomes a hidden millstone around your neck.

'a hidden millstone around your neck'

To have stayed in gainful employment to the extent that I have for so many years whilst battling an illness whose symptoms are brought on and exacerbated by ubiquitous and ever increasing wireless and electrically driven technologies that all workplaces have become reliant upon, shows that I am not work-shy, or indeed suffering some kind of delusion, but a cogent, highly resilient and determined individual.

However, there comes a time where enough is enough.

'there comes a time where enough is enough'

The level of stress that I have endured over the course of 25 years suffering EHS is inordinate, to say the least, but one thing is for sure, EHS can be seen in analogical terms as the opposite to a drug addiction. Put simply, the more exposure you have to EMFs, the less you need to bring on a broad symptom set, to which the end conclusion is stress, pain and suffering and ensuing physical and mental ill health.



Over the last two years, by virtue of the Covid pandemic, I have not worked and thus I have largely been sheltered from the over-exposure to the growing barrage of EMFs that almost all workplaces will bestow upon me. Thus, I have become better at tolerating the symptoms as they arise in daily domestic life, as my sensitivity levels are lower as a result of avoiding the aforementioned environments. Avoidance of EMFs wherever possible is a prime treatment for the afflicted.

If I were to go back to work, 'any work' is likely to put me back once again into a cycle of stress, pain and suffering. One can't escape the ubiquitous nature of wireless technologies that saturate our daily lives and this reality becomes ever more daunting day by day as these

technologies evolve and expand at an exponential rate. In reality, as one navigates oneself as an EHS-afflicted individual through daily life, it's increasingly likely that you will encounter multiple situations where your symptoms will be triggered, often when you least expect. When things can change at such an unpredictable and rapid rate, this results in a state of permanent anxiety/arousal which further compounds symptoms and feelings of ill health, again never more so than in the workplace.



So, in summary, I have enough trouble trying to live a normal life with my family in our family home, enduring all the domestic emissions

that take place both from inside the house and from neighbouring properties and local wireless infrastructure. I do not possess the physical or mental energy to maintain both the domestic life and working life as a result of enduring EHS. Something has to give.

'I do not possess the physical or mental energy to maintain both the domestic life and working life as a result of enduring EHS. Something has to give.'

All work, in my experience, demands reliability, consistency, sustained input and routine. Sadly, the symptoms of EHS mean that I can't guarantee the above, through no fault of my own. I am collateral damage from the aforementioned technologies. I have to accept that, but your assistance as a doctor in this matter is much needed and would be most appreciated.

READERS' COMMENTS

Holiday smoke-detector grief

"Our holiday cottage was delightful when we turned off the Wifi, but we suffered from the smoke detectors emitting 0.3 V/m pulses every 10 seconds. It would have been easy for the builders to install wiring instead of radiation."

Business and government misinformation

"I see that Lakeland Paints now offer RFR/EMF protective paints. It's odd how businesses see the need for protection, but the UK government and mobile phone companies still deny the problem."

EHS denial: UKHSA/PHE/DHSC's oldest lie?

"Tesla was EHS and EHS was recorded in 1746, yet UKHSA/PHE and the Department of Health and Social Care still deny its existence. Does this make UKHSA/PHE/DHSC's denial one of the oldest lies in history? Even the government's psychological explanation of the Camelford 1988 aluminium poisoning lasted for only 25 years until

their apology in 2013, and denial of harm from tobacco and asbestos did not reach the duration of their EHS denial."



Sunhats and no Wifi for children?

"If primary schools insist that children wear sunhats to protect them from sunshine, an EMF radiation, shouldn't they also protect them from Wifi, also harmful EMF radiation and a 2B carcinogen, by ensuring all Wifi is switched off?"

Wifi etc. reduces SATS scores and harms health

"Do heads of schools realise that Wifi and mobile phones bring down their SAT scores, and GCSE and A level grades, since they affect short-term memory, sleep, spatial awareness etc?"

"Do heads realise that Wifi and mobile phones can cause cancers, infertility, environmental sensitivities and other neurological harm, and that they have a duty of care to protect the children in their charge?"

Covid: exacerbated or triggered by RFR and EMF personal field?

"I wonder if other readers have had similar experiences to the following two:

(1) While driving along a busy main road with many phone masts a day before I tested positive for Covid, I noticed that I experienced tightening of the chest and coughs on the brow of some hills and when passing under some bridges. Since the change in the intensity of phone mast radiation tends to be suddenly higher as you go over the top of a hill and when it's constricted under a large bridge, I assume that the radiation was also triggering Covid symptoms.

(2) The same effects happened when sitting for a while, but only closer than 6 feet (2m), near a family member with Covid wearing a mask. It is unlikely that the effects were caused solely by aerosol droplets, since these could have been all around the room despite the mask. Is it possible that the Covid virus in one person can effect someone else if they are within the short range of each body's electromagnetic field?

[The Editor comments:

In 1799, viruses were reported as triggered by high atmospheric electromagnetic exposures.

Some viruses can cause demyelination, a process where the protection of nerves is compromised, leading to external electromagnetic fields interfering with the body's neurological systems. This is why people with Multiple Sclerosis and similar demyelinating neuropathologies can be electrosensitive to man-made EMFs and RFR.

For case (1), several studies have shown higher rates of Covid in areas with higher levels of RFR including 5G. The RFR can have a synergy with increases in air particulate pollution which may involve greater electrostatic fields.

For case (2), the late Prof. Luc Montagnier who won the Nobel Prize for his work on the HIV virus, showed in 2009 that DNA from viruses can transmit their signature at 1,000 to 3,000 Hz through water. It has long been known that EMFs from the human heart and brain can be detected with sensitive equipment outside the body, and sensitive people can still outperform many

technical devices in detecting EMFs. Thus it seems possible human bodies could communicate viruses in this way, just they can synchronise in other ways too.]

Shielding a bed on holiday

"For holidays, I've constructed a frame to support a bed net. The top of the frame uses a mosquito net frame bought on ebay. This is too weak on its



own for a heavy EMF shielding net, since the 3-way corner joints are plastic and the thinner (14mm) poles are aluminium, so I've strengthened the frame at the bottom. Its vertical poles are set at the bottom onto short

lengths of 25mm copper pipes placed into unequal 3-way copper joints. Into 1 smaller end of the joint is glued a very short length of 14mm copper pipe with 1 right-angle copper bend glued with short length of 14mm copper pipe, like the other small



end. Into these copper pipes, wooden rounded dowel rods can be inserted, suitably sanded down



(all available from DIY stores). The wooden dowel rods are linked together by lengths of

14mm copper pipe, so that each is no more than 20 inches long, like the poles of the mosquito net frame. Diagonal tension between the four corners of each rectangular frame of two sides is provided by string tied to the corner joints. The frame sits on the floor with the bottom cross bars running under the bed, near the bed feet."

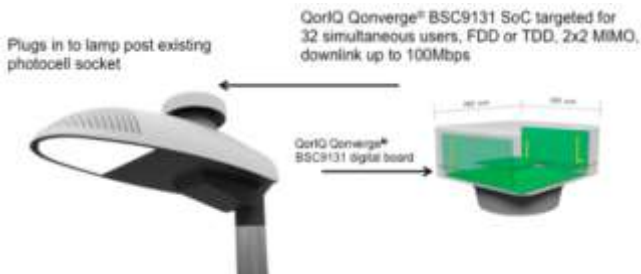
SUFFERING WEAPONISED 5G STREET LIGHTS

Excerpts from an account by Paul, a 75-year-old resident in Birmingham, UK, entitled 'Streetlights Have Been Weaponized', of April 16 2022.

I have been personally affected by new streetlights since Birmingham City Council Lighting Department tested the 5G function of these lights in December 2019. They are situated in front of my house. Being electrosensitive, meaning that I am able to feel and am adversely affected by radiation from mobile phones and masts, like nearly a million other people in the UK, I immediately felt this radiation when it was turned on.



The effects were instant whenever I answered the front door or went near any windows in my house. The immediate depressed mood, desire to die, and commit suicide were intense. I would have been exposed in line with the streetlight during the day for only a few seconds to get these effects. When I moved away, the harm would pass in about 10 minutes, and I would be back to normal. This would happen several times a day before I learned to avoid this.



ENodeB by TTP (Technology Partnership), based in Cambridge, is a small LTE 50m cell fitted into a photocell socket of a standard lamppost which can use MIMO to support 32 users at downlink rates of up to 100 megabits per second.

(Claudia Bacco: "Small cells in street lights – a bright idea" RCR Wireless News, June 24 2015)

I phoned the Streetlighting Department, and the result was they turned the 5G RF radiation function off for all the streetlights in the vicinity of my house. Wonderful!

I was back to normal life until they came on again on January 1st 2020. This time the Department said responsibility had been passed to the firm Amey who had the contract for maintenance with the council. I contacted Amey but they didn't respond. This situation has continued for the last two years.

The effects of the radiation on me have resulted in my only being comfortable to relax or read in the cloakroom/toilet of my house. Often, I have to take my meals in there as the lounge and dining room are affected.



I can only go into my garden for a few minutes and only if I am wearing a protective suit of an under-suit and hood made of BlocSilver anti-5G fabric. I also wear the protective suit to do housework just in case I get too near the windows and the new LED/5G new streetlights.

The video shows how I have to use my cloakroom/toilet as an office, and as the only place to lie down and rest during the day.



It was when reading the statements below, made by experts in microwave weapons about what the controllers of these microwave weapon systems can do with them, that I recognised my own symptoms.



Barrie Trower, retired British military expert in microwave weapons:

"If you are targeting demonstrators [with Radio Frequency Radiation], you make them suicidally depressed. They don't care about demonstrating any more, because they are too upset. With one pulse frequency you can make people so suicidal they cannot be bothered to act like a demonstrator anymore. All they want to do is sleep or lie in bed all day."

William Binney, former technical director, US National Security Agency (NSA): "If you are a target, there is virtually nothing you can do".

Dr James Giordano, member of the Neuroethics, Legal and Social Issues (NELSI) Advisory Panel of the Defense Advanced Research Projects Agency (DARPA):

"I can disrupt an individual from the level of their cell to their system and disrupt individuals on a variety of levels from individuals all the way up to the social fabric. Target a specific individual change or eliminate that individual with very little attribution or trace and be able to leave prior to any attribution."



Omnispace teams with TTP to expand 5G development" Omnispace, March 16 2022.

These new weaponized streetlights have been fitted in the area where I live. Unsurprisingly, I am suffering the very same symptoms described by Barrie Trower. These include sudden onset depression and desire to commit suicide, upset stomach, itching skin, painful joints and muscles, extra systole heart beats, heart arrhythmia, tinnitus, profound lack of motivation etc.

Even Public Health England [UK Health Security Agency] warns that the blue light emitted from these lights can cause retinal and eye damage. Dr Robert Hanson believes that LEDs emit a "killer light", whose short wavelength damages both mind and eyes. Many LED lights have tiny surveillance cameras fitted. A summary of the deleterious health effects of LED lights is in the ES-UK Newsletter for Summer 2018. New LED streetlights may double cancer risk.

There has been no discussion or debate with the public, nationally or locally, about the health and environmental damage caused by 5G emissions. Why the haste? Why the deviation from the cautionary principle, which requires extensive laboratory and then field testing before being rolled out worldwide?

In fact, the first study of 5G's effects on humans was published recently. A 5G base station installed on the roof of an apartment building caused high levels of RFR in the apartment of the two persons living below. Within a few days, the residents developed EHS symptoms. After moving to a place with lower radiation, the symptoms quickly decreased or disappeared. After switching on 5G, the levels increased 188 times. The people in the flat below "experienced fatigue, sleeping problems, dizziness, emotional effects such as irritability and depression, nose bleeds, tinnitus, heart symptoms, memory problems and skin issues, all typically associated with microwave syndrome."

(Paul Gregory: "Streetlights Have Been Weaponized" April 16 2022)



Photo: DCMS: "Street lamps and bus shelters to help boost 5G roll out in £4 million trial" Sept. 9 2021

SCIENCE against FICTION

or

NON-THERMAL against THERMAL-ONLY

Adverse non-thermal effects have been known since 1733, including EHS from 1746. It is extraordinary that, nearly 300 years later, a small clique of wireless advocates, including the ICNIRP, still denies the established mainstream scientific evidence of adverse non-thermal effects, such as EHS and cancers, and still invalidly claims only thermal effects. In promoting this fiction against the mainstream science, they have been allowed to destroy the lives and livelihoods of millions of people, a process perhaps unique in human history both in scale and in duration.

In 1733 non-thermal adverse effects were shown from EMFs.

In 1746 non-thermal EHS was shown from EMFs.

In 1893 non-thermal adverse effects were shown from RFR.

In 1930 the primary adverse effects of RFR in nervous tissue were shown as non-thermal.

Internal heating was a secondary by-product of RFR.

In 1932 cases of non-thermal EHS were described in Germany.

In 1935 the USSR adopted non-thermal guidelines.

In 1945, radar at non-thermal levels was shown to cause cataracts and cancer.

In 1957 parts of the US military rejected this non-thermal scientific evidence. They imposed Schwan's 1953 guidelines based on Schwan's

heating myth, described by other parts of the military as 'arbitrary' and unscientific.

In 2002 the ICNIRP recognised the need for non-thermal guidelines but in 2020 still proposed only thermal ones.

In 2021 US Appeal Judges used the same word 'arbitrary' to describe the FCC's similar failure to assess the non-thermal effects, established since 1733.

FURTHER PROGRESS ON NON-THERMAL ADVERSE EFFECTS

- In November 2021, the UK High Court in a landmark case overturned approval for a 5G mast since in part the council failed to address the non-thermal health impacts.
- In February 2022, Prof. Hardell et al. published the first definitive health study on 5G. It showed non-thermal EHS symptoms in residents living below a 5G mast on a block of flats.
- In April 2022 Pittsfield's Board of Health in the USA issued a cease and desist notice against a 5G mast after nearby residents developed EHS symptoms from its non-thermal radiation.
- In May 2022 Prof. Belpomme et al. published a study confirming non-thermal EHS: there are "sufficient data for EHS to be acknowledged as a distinctly well-defined and objectively characterized neurologic pathological disorder".
- In May 2022, the Action Against 5G campaign under Michael Mansfield QC was allowed to resume its challenge over the government's failure to provide adequate information about 5G's non-thermal risks, under the Human Rights Act 1998 protecting life, health and dignity.
- In May 2022, Dömötör Z et al confirmed non-thermal EHS in an ecological study.
- In June 2022, a French court ordered a non-thermal 4G mast to be switched off because of the deaths of 20% of a herd of cows after the mast was activated.
- In June 2022, a German court confirmed that landowners and telecoms are liable for non-thermal harm from masts.

UNSCIENTIFIC DENIALS OF NON-THERMAL ADVERSE EFFECTS

- In May 2022 an anonymous author denied that ICNIRP was unscientific without mentioning the adverse non-thermal effects, known since 1733, which ICNIRP unscientifically still denies.
- In May 2022, in an attack on Prof. Frank's criticism of 5G and the need for protection against established non-thermal effects, an anonymous ICNIRP author claimed that "the lowest exposure levels that have been found to cause harm, cause that harm via heating" and thus "all adverse health effects are protected against" if ICNIRP continues to ignore established non-thermal effects.
- In June 2022, Nordhagen EK et al. showed that ICNIRP's circularity of authorship in trying to support its rejection of non-thermal effects appears very close to fraud.
- Throughout 2022, governments have recklessly deployed 5G radiation without scientific evidence proving its non-thermal safety, although the only live study on 5G's health impacts shows that 5G at non-thermal levels can cause EHS symptoms.
- In mid 2022, the UKHSA, which is "responsible for protecting every member of every community from the impact of ... radiological incidents and other health threats", has failed to protect the 3.6% of the population disabled by the extraordinary high levels of RFR/EMFs which the UKHSA allows in the UK by adopting the obsolete ICNIRP 2020 heating guidelines. These fail to protect against non-thermal effects such as ES and EHS.
- In 2022, by still refusing to accept non-thermal effects, UKHSA is failing "to make the nation's health secure", its primary aim. Instead, the UKHSA is victimising and harassing the 3.6% of the population whose health is ruined by the UKHSA's refusal to accept non-thermal effects.

ARIEM: EHS AND MCS RESEARCH



From left: Dr. Marc Arazi, Prof. Dominique Belpomme and Philippe Irigaray (PhD)

The Association for International Research on EHS and MCS (ARIEM) [Association pour la Recherche Internationale sur l'EHS et le MCS (A.R.I.E.M.)] was created on May 24 2022. It aims to develop knowledge on EHS and MCS through high level research involving the best teams engaged in this research in France, in collaboration with the best international teams.

This Association is under the patronage of an international scientific council composed of high-level experts. A.R.I.E.M. will also be committed to informing the medical profession and the public authorities about the increasing number of patients suffering from these pathologies and their consequences in their personal, social and professional life.

The founding members are:

[European Cancer and Environment Research Institute](#) (ECERI) - Prof. Belpomme, Dr Irigaray; [Phonogate Alert](#) Association - Dr. Marc Arazi. with four other associations as full members: POEM 26; [Robin des toits](#); [SOS-MCS Association](#); [Zones Blanches Association](#).

France has about 3 million with EHS and ANSES estimated 5% in 2018. In nearly 25% of cases EHS is associated with MCS (multiple chemical sensitivity).

("Creation of ARIEM (Association for Research at International Level on EHS and MCS)" PhoneGateAlert, May 31 2022)

Ecological study confirms real EHS

EHS has been recorded in the scientific literature since 1746 and shown by provocation tests since 1991. A study in Hungary, described as ‘an ecological momentary assessment (EMA) protocol’ using a personal electronic device worn on the hip for 21 days to record EMF/RFR which was then compared with a handwritten log of specific EMF/RFR symptoms for three subjects, two living in the country and one in the city of Budapest, found that for the person in the city the association with RFR levels ‘was partly supported, both for symptom reports and autonomic reactions’.



96% or more of the RF EMF values were <0.05 V/m, and only 0.38% or less were >0.5 V/m in all measured frequency ranges for Participant #1 and #2. Values of #3 were higher in downlink ranges. The most common symptom for #1 and #2 was tinnitus at 55% and 35%, whereas for #3 it was headache at 50%. #3 reported 55 symptoms whereas #1 and #2 reported much higher levels of 157 and 358 respectively, although 96% of RFR values were <0.05 V/m for #1 and #2

[low intensities <0.05 V/m make it more difficult to distinguish causal RFR symptoms – Ed.]

Reported latency time of symptom formation was 0–5 min for #2 and #3, and 0–20 min for #1. #1 and #2 reported that their condition influenced their everyday functioning very much (*Impact*: 3 out of 3), whereas #3's rating was “medium impact” (2 out of 3). The effects of different EMF frequencies on heart rate (HR) and respiration rate (RR) were consistently negative, i.e. higher exposures predicted lower HR and RR. (Dömötör Z et al, Heliyon, 2022)

ES symptoms among MRI/CT workers

Symptoms reported: “vertigo/dizziness, nausea, metallic taste, illusion of movement, ringing sensations/tinnitus, headache, unusual drowsiness/tiredness, forgetfulness, difficulties concentrating, and difficulties sleeping”.

Working at ≥ 3 T increased SMF-associated symptoms as compared with ≤ 1.5 T (OR: 2.03).

(Glans A et al, Eur Radiol., 2022)



Human magnetic sense established

“Magnetic orientation of the subjects was sensitive to the wavelength of incident light and was critically dependent on blue light reaching the eyes. These results establish the existence of a human magnetic sense and suggest an underlying quantum mechanical magnetoreception mechanism.”

(Chae K-S et al, Sci Rep., 2022)



Mobile phone use during pregnancy affects motor movements

“Infants of mothers with different 2 hours rather than 0, 20 or 40 minutes of mobile phone usage per day during pregnancy differed with regard to the quality of fidgety movements, motor repertoires, posture and other movements.”

(Bektas H et al, Biotechnol Biotechnol Equip., 2022)

School RFR above international limits, 5G

A survey of RFR including Wifi outside a school in Kosovo showed an average of $961 \mu\text{W}/\text{m}^2$, among other European surveys ranging from 125 to $2,185 \mu\text{W}/\text{m}^2$. Much of this came from mobile phones. However, within the classrooms, where a wired Local Area Network was used, Wifi alone during classes averaged $19 \mu\text{W}/\text{m}^2$, but this excluded mobile phone signals also present at $213 \mu\text{W}/\text{m}^2$. Average readings for a location

adjoining the school and near a 5G antenna reached 1,291 $\mu\text{W}/\text{m}^2$ in the week and 3,605 at weekends.

The Bioinitiative limit for children is 3 $\mu\text{W}/\text{m}^2$.

(Hamiti E et al, IEEE, 2022)

Adolescents RFR exposures

Median total RF-EMF exposure: 40 $\mu\text{W}/\text{m}^2$ at home, 94 $\mu\text{W}/\text{m}^2$ at school, 100 $\mu\text{W}/\text{m}^2$ overall.

The Bioinitiative limit for children is 3 $\mu\text{W}/\text{m}^2$.

(Schmutz C et al, Environ Res., 2022)

Problems close to RFID readers on buses

‘a person present near multiple HF RFID readers of a passive proximity integrated circuit card (PICC) working in an IoT application in a public transport vehicle, ... the absorption of EMF emitted continuously by HF RFID readers (located 10 cm away from a body) in the human body may have a significant influence on humans when the PICC reading ranges are longer than 15–23 cm (depending on the class of PICC) for a single reader and when multiple sources of exposure are used in a public transport vehicle—even at reading ranges 15% shorter (13–20 cm).’

(Zradziński P, Int J Environ Res Public Health, 2022)



2017-2020: 2.3 increase in RFR, mainly Wifi

The largest crowd-based measurement of population exposure to RF produced by cellular antennas, Wi-Fi access points, and Bluetooth devices for 254,410 unique users in 13 countries from January 2017 to December 2020, using smartphone measurements via the ElectroSmart Android app. Then, we use these methods to evaluate and characterize the evolution of RF exposure. We show that total exposure has been multiplied by 2.3 in the four-year period considered, with Wi-Fi as the largest contributor.

(Boussad Y et al, Environ Int., 2022)

RFR oxidative stress and demyelination

2.1GHz can cause oxidative stress and demyelination, leading to neurodegenerative diseases. (Sharma A et al, Environ Toxicol Pharmacol., 2022)

Bacteria communicate at ~3 GHz

Bacteria have been shown to communicate at 3.18 GHz and 3.45 GHz with long-term and short-term cycles of the total radiation.

(Rao M et al, IEEE, 2022)

RFR induces oxidative stress and reproductive failure in worms from the 15th generation

Worms exposed to 9.4 GHz at 4 W/kg for 10 hours per day had increased oxidative stress from the 10th generation and decreased fecundity from the 15th.

(Sun A et al, Bioelectromagnetics, 2022)



EMF and massive insect population decline: withdraw mobile phones and masts worldwide, urgently

“75% of insects have been wiped out since 1989 in tandem with the rise of wireless technologies”. The two causes given by people denying EMF effects are habitat loss and pesticides used since 1945. But grasshopper numbers fell by nearly 33% in Konza Prairie, Kansas, between 1996 and 2017, where there was no habitat loss and no pesticides used. Other studies show that EMF destroys 75% of hives. After a cell tower was installed in Idaho in May 2021 the entire beehive population on an adjacent farm died within a month. Mobile phone 900 MHz radiation decreases fruit fly reproduction by up to 60% through DNA breaks and cell death.

“The only real solution is the immediate withdrawal of 4-5G cell towers and mobile phones worldwide, as a matter of urgency.”

(Camilla Scaramanga: “EMF ignored in massive insect population decline” The Light Paper, May 2022, p.21)



'JUNK' AND 'FLAWED' SCIENCE

ICNIRP thermal 2020 fails 'scientific quality': 'independent' claim 'very similar to fraud'

"ICNIRP 2020 itself, and in practice all its referenced supporting literature stem from a network of co-authors with just 17 researchers at its core, most of them affiliated with ICNIRP and/or the IEEE, and some of them being ICNIRP 2020 authors themselves. Moreover, literature reviews presented by ICNIRP 2020 as being from independent committees, are in fact products of this same informal network of collaborating authors, all committees having ICNIRP 2020 authors as members. This shows that the ICNIRP 2020 Guidelines fail to meet fundamental scientific quality requirements and are therefore not suited as the basis on which to set RF EMF exposure limits for the protection of human health. With its thermal-only view, ICNIRP contrasts with the majority of research findings, ... the ICNIRP 2020 Guidelines cannot offer a basis for good governance."

"five out of six WHO core group members were ICNIRP affiliates, of whom three are among the authors of ICNIRP 2020. Such a claim and circularity of authorship is encroaching upon something very similar to fraud."

(Nordhagen EK et al, Rev Environ Health, 2022)

'Spreading misinformation ... a junk review'

"I have already – now among many others – called for the retraction of his paper. ... The only way out is retraction. Why then did Nora Disis, the editor of JAMA Oncology, and Monica Morrow, the journal's associate editor for reviews, look favorably on Grimes's deeply flawed paper, which could have been lifted from a Vodafone press release? ... I wonder whether Nora Disis and Phil Fontanarosa will ever regret spreading misinformation by allowing a junk review into the JAMA family of journals."

(Louis Slesin: "How To Succeed in Science: ... Junk Science in a JAMA Journal" Microwave News, April 21 2022)



Experts: Million Women study is 'fatally flawed'

Expert scientists assert that the 'Million Women' study, based at the Richard Doll Building, Oxford, is "fatally flawed and designed in a way that cannot evaluate cell phone cancer risk."

("Scientists reject "Million Woman" Oxford cell phone cancer study as fatally flawed" Environmental Health Trust, April 6 2022)

Million Women 'methodologically unsound'

Schüz et al., 2022 is "methodologically unsound due to limited assessment of cell phone use over time and misclassification of exposure. ... only 18% of cell phone users talked on cell phones more than 30 minutes per week (= 4 minutes per day = 26 hours per year = 260 hours over 10 years) far less use than what it would take to see a statistically significant association with brain tumour incidence. ...

The study also misclassified some "never" and "ever" users: 45.8% of the 2001 never users talked on cellphones more than 1 minute per week (vs. 73.5% of ever users), and 8.8% talked on their cellphones more than 30 minutes per week (vs. 18.2% of ever users). ...

The current study did not control for cordless phone use, a potential confounder, which likely increases brain tumor risk.

The study also failed to control for those who kept the cellphone away from their head during phone call phones by using the speaker phone or a headset. ...

The phrases, "accumulating evidence" and "under usual conditions" seem misleading given the limitations of the current study. ...

The U.S. National Cancer Institute should be admonished for publishing this study in their hallmark journal, JNCI.

(Moskowitz JM: "The UK Million Women Study of Cell Phone Use and Brain Tumor Risk; Preliminary comments on "Cellular Telephone Use and the Risk of Brain Tumors: Update of the UK Million Women Study" Safemr, March 30 2022, updated April 1 2022)



INTERNATIONAL NEWS

Professor Franz Adlkofer 1935-2022

We are sorry to report the passing of Professor Franz Adlkofer. His outstanding REFLEX project of 1999-2004 funded by the European Union confirmed the effects found earlier by the USA's Wireless Technology Research project. These included DNA breaks caused by both RFR and ELF, requiring their classification to be raised to a Class 1 or 2A carcinogens. *Prof Adlkofer in 2011 (Wikipedia)*



Geomagnetic storm takes out satellites

On 3 February 2022, Elon Musk's SpaceX launched 49 Starlink broadband-beaming satellites. But 40 of them were likely to meet their demise due to a geomagnetic storm that struck a few days after their ascent, causing extra drag with gravity pulling them into Earth's atmosphere.

(Laura Dobberstein: "Geomagnetic storm takes out 40 of 49 brand new Starlink satellites" The Register, February 9 2022)

Directed Energy Weapons, Australian protestors

Directed Energy Weapons were allegedly used on February 12 2022 in the protest at Canberra. People reported ringing in the ears, heart palpitations, feeling generally unwell, nausea, and headaches. One woman in tears points to burnt lips as an effect saying many people suffered burns of different kinds. High powered microwave weapons are known from NATO and European Parliament documents to be deployed on the populace. One person took readings of up to 20,000 milliwatts being pulsed into the crowd. Police Inspector Crenshaw, when questioned by a member of the Senate Legal and Constitutional Affairs Committee, twisted his mouth in clear discomfort to mutter about "police methodology ... public interest immunity claims" in refusing to elaborate on the LRAD weapon he was asked about. However, police do not have immunity for torturing or physically assaulting the populace.



Left: transmitter, February 12 2022, at Canberra. Right: Marconi's parabolic transmitter used on Salisbury Plain on September 2 1896 for the first public demonstration of radio frequency radiation. People reported conscious neurological effects such as making the 'feet tickle'. Marconi Collection 31092, Museum of the History of Science, Oxford University. (Ramola D: "Directed Energy Weapons Used at the Feb 12 Canberra Protest Make People Sick | Police Questioned in Parliament Refuse to Elaborate" EveryDay Concerned Citizen, February 17 2022)

New Zealand report ignorant on EHS science

"While the research seems to discount EMF exposures as the cause of EHS, there is still no clear idea of how people develop the symptoms in the first place."

(Anon.: "Interagency Committee on the Health Effects of Non-ionising Fields: Report to Ministers" Ministry of Health, Wellington, New Zealand, 2022. §4.3, p.21)

[\[The scientific literature from 1746 shows EHS established as caused by exposure to EMFs - Ed.\]](#)

'Havana syndrome' is really EHS

On February 1, 2022, the executive summary from a report prepared by the IC (U.S. Intelligence Community) Expert Panel on Anomalous Health Incidents (AHIs) was declassified by Avril Haines, Director of National Intelligence. It concludes: "Four 'core characteristics' were prominent among these AHIs: the acute onset of audio-vestibular sensory phenomena, sometimes including sound or pressure in only one ear or on one side of the head; other nearly simultaneous signs and symptoms such as vertigo, loss of balance, and ear pain; a strong sense of locality or directionality; and the absence of known environmental or medical conditions that could have caused the reported signs and symptoms." Dr Joel M. Moskowitz said: 'If my hypothesis is correct that a surveillance device is the source of

exposure for the "Havana syndrome" rather than a weapon, and if only a minority of exposed individuals are susceptible to developing serious symptoms associated with EHS, then the extent of surveillance could be widespread.'

("The "Havana syndrome": A special case of electrohypersensitivity? IC Expert Panel Executive Summary, Safe ERM.com, February 3 2022)

EHS microwave targeting on US CBS

In 2001, then-Rep. Dennis Kucinich, D-Ohio, introduced legislation to ban the weaponization of "radiation, electromagnetic" or other energies against people, but it was dropped following media derision.



Meanwhile, the US military continued developing such weapons, including the Active Denial System, or "Pain Ray." Following reports confirming that cases of the Havana syndrome are EHS microwave attacks, a CBS "60 Minutes" report, "Targeting Americans" on February 20 2022, CIA Director William Burns said he was taking reports seriously.

Watching this documentary, I thought about the thousands of private citizens who call themselves "targeted individuals" who've reported similar experiences, including perceived attacks by remote-controlled weapons causing long-term illness. Among them is my father. A Mexican immigrant who worked in San Diego before he was laid off, he believes the CIA experimented on him with electromagnetic weapons that caused him to collapse in pain and develop insomnia, among other things. In his telling, which he's never been able to prove, the CIA was testing the weapons' ability to dramatically alter behavior — by targeting drug addicts with electronic intervention. (My father was using crack cocaine, and quit because of this perceived intervention.) Since telling his story in my memoir, I've received dozens of emails from others who claim they're victims of similar electronic torture. Taylor hopes his CBS testimony will encourage other victims to report. (Jean Guerrero: "US taking victims of 'Havana syndrome' seriously" Gulf Today, February 28 2022)

Wait for FCC review

For 25 years, from 1996 to 2021, the U.S. FCC refused to revise its 1996 RFR safety regulations.



The FCC is the sole U.S. agency that

determines the acceptable RFR exposure for people of all ages, wildlife, and the environment and it insists its original 1996 limits are fine.

In 2019, the Environmental Health Trust (EHT), Consumers for Safe Cell Phones, Children's Health Defense, and 11 other petitioners sued the FCC. They argued that although the U.S. Government Accountability Office told the FCC in 2013 to review its 1996 limits in light of new research, six years later, the FCC was still repeating its all-is-safe mantra. Countries such as Italy, Switzerland, France, Israel, China, India, and Russia have more stringent limits than the USA regarding the use of Wi-Fi in schools and day care centers, and on acceptable levels of radiation emissions from cell towers. The lawsuit notes that the FCC even ignored the landmark 10-year, \$30 million NTP study — which produced unequivocal results showing cancer in 2019.

The U.S. Court of Appeals of the D.C. Circuit ruled in August 2021 that the FCC had to re-examine the research to determine if its regulations should be updated. Further, the court called the commission's behavior "arbitrary and capricious," since it had ignored evidence of the harm to children's brains (which are not fully developed) and to male and female reproductive systems. It also ruled that because the FCC never produced regulations about RFR's effects on wildlife, it had "completely failed" to address the evidence of potential environmental harm.

However, the court did not set a date for the FCC to comply. In November 2021, the EHT asked the commission to consider additional studies that were completed after 2019, when the suit was filed. (Barbara Koeppel: "Federal Court Instructs FCC to Review Electromagnetic Radiation Standards" Washington Spectator, March 9 2022)

LEGAL AND ADMINISTRATIVE UPDATES

Legal Action Against 5G case to proceed



Legal Action Against 5G with Michael Mansfield QC announced on May 25 2022:

“We are delighted to announce that the Court of Appeal has today granted permission for our case to proceed on two grounds concerning:

1. The failure to provide adequate or effective information to the public about the risks and how, if it be possible, it might be possible for individuals to avoid or minimise the risks;
2. (a) The failure to provide adequate and sufficient reasons for not establishing a process to investigate and establish the adverse health effects and risks of adverse health effects from 5G technology and/or for discounting the risks presented by the evidence available; and/or (b) failure to meet the requirements of transparency and openness required of a public body.

These grounds advance a breach of the Human Rights Act 1998 by omissions and failings in violation of the positive obligations to protect human life, health and dignity.

(Legal Action Against 5G via CrowdJustice: “Update on 5G Legal Action - Help us secure a safer future” May 25 2022)



Human Rights Act 1998

5G Appeal: UK government failed in obligation to protect human life, health and dignity

The Court of Appeal this week has granted permission for a

case brought by anti-5G pressure group Action Against 5G case to proceed on two grounds. These grounds were claimed in Court to “advance a breach of the Human Rights Act 1998 by omissions and failings in violation of the positive obligations to protect human life, health and dignity.

(Staff Reporter: “Court of Appeal green lights Anti-5G case against govt” MobileNews, May 26 2022)

Court recognises EHS as cause for exemption from jury duty

A person with EHS in the UK was selected for jury duty in February 2022 but then alerted the court of the problems of RFR for someone with EHS. In March 2022 the court exempted this person from all future jury duty on the grounds of their EHS with its non-thermal harm from RFR like Wifi and mobile phones. Courts, like all employers, have a duty to ensure healthy and safe premises under the Health & Safety Act 1974. However, since the court did not accommodate the person concerned by removing the health and safety hazard, the court must have instead applied the need to avoid harassment and victimisation under the Equality Act 2010.



Long COVID, with symptoms similar to EHS, comes under the Equality Act 2010

[Some symptoms of Long COVID are similar to EHS and both can result from demyelinating conditions. Tribunals awarding benefits in appeals against the DWP by people with EHS since 2012 have also relied on confirming long-term disability.]

At a preliminary hearing an employment tribunal found that the claimant, Mr Burke, who had long COVID, was disabled under the Equality Act 2010, in the case of *Burke v Turning Point Scotland* (Employment Tribunals (Scotland) 4112457/2021) held by Cloud Video Platform on April 5 2022 under Judge JD Young. “The Judgment of the Employment Tribunal is that the claimant was a disabled person within the meaning of s6 of the Equality Act 2010 in the period between 25 November 2020 and 13 August 2021.”

§46: ‘In those circumstances, the case should proceed to a hearing in respect of discrimination arising as a consequence of disability, indirect

disability discrimination, and failure to make reasonable adjustments.’

This appears to be a landmark ruling with the first person in the UK to successfully claim that long Covid is a disability under the Equality Act.

Terence Burke was employed as charity caretaker by Turning Point Scotland from 2001 until 2021. His continuing symptoms included fatigue, joint pain, loss of appetite, loss of concentration, and insomnia. He did not feel well enough to complete his usual household tasks such as cooking and cleaning and withdrew from socialising with friends and family. He found that his symptoms would fluctuate in severity from day to day, but this in itself made him anxious. He was not able to return to work on any meaningful basis.

The tribunal accepted that his symptoms had a substantial adverse effect on his ability to undertake day-to-day activities, and that they were long term (capable of lasting 12 months or more). Accordingly, the employment tribunal found Mr Burke was disabled.

(Maighna Nau: “Long Covid is a disability, tribunal rules in landmark case” Telegraph, June 20 2022; Deborah Rookes: “Recognising long COVID as a disability - Burke v Turning Point Scotland” Harper Macleod, 24 June 24 2022)

Early retirement on health grounds through EHS

Sally Burns, a 59-year-old social worker who suffers from EHS, was granted early retirement on health grounds because of her EHS. She said: “I have worked in Health and Social Care for 35 years, supporting some of the most disabled and vulnerable members of our society and advocating to ensure their rights have been upheld. To have been on the receiving end of societal prejudice, discrimination, ignorance and misunderstanding, has been devastating. My work has been important to me. I hoped to be able to work well past retirement age, not to go early”. The Independent Registered Medical Practitioner (IRMP) report concluded: “Mrs. Burns has a medical condition that renders her permanently incapable of undertaking any gainful work. There currently are no treatments available for her

condition; avoidance of emissions is the only way to significantly reduce her symptoms.”

(“59 year old social worker wins ‘early ill health retirement’ for disabling ‘Electromagnetic Hypersensitivity (EHS)’ PHIRE, June 15 2022)

EHS-like Havana symptoms: pay-out of over \$100,000 each

The Biden administration plans to pay some diplomats and intelligence officers some \$100,000 to \$200,000 each to compensate for the “Havana syndrome,” according to congressional aides and a former official familiar with the matter. In autumn 2021 Congress passed a law mandating that the State Department and CIA compensate current and former officials suffering from what the government calls Anomalous Health Incidents, or AHIs. Symptoms include headaches, vision problems, dizziness and brain fog, among other ailments.

(John Hudson, Shane Harris: “U.S. to give some ‘Havana syndrome’ victims six-figure compensation” Washington Post, June 23 2022)

French court: 4G switch-off after cows ill

The administrative court in Clermont-Ferrand (Auvergne-Rhône-Alpes) ordered a 4G antenna to be switched off for two months after Frédéric Salgues, a farmer in Haute-Loire, said that milk production had dropped by 15-20% in the days following the antenna installation, and 40 of his 200 cows had died. Orange has three months to stop the antenna’s operation while ensuring phone coverage, including emergency calls, for Orange users in the area affected. Mr Salgues said: “There are no medical elements that could [otherwise] explain this brutal drop in milk production” apart from the antenna’s installation in July 2021 200m from his farm. Philippe Molhéat, the mayor of Mazeyrat-d’Allier, who had previously authorised the antenna’s installation, testified in favour of the farmer. He said that he feared “a catastrophe on a human level” and that his “concerns” were growing for the 1,500 inhabitants of his village.

(Hannah Thompson: “French Court Orders 4G Antenna Switch-off Over Cow Health Concerns” connexionfrance.com, TBH, May 25 2022; “French court orders 4G turn off after cow deaths” Scottish Farmer, June 18 2022)



French court fines RTE: powerlines harm cows

The Coutances court (Manche) sentenced the company Réseau de transport d'électricité (RTE), a subsidiary of EDF, to pay € 460,000 to a dairy farm in Manche, located at the time of the first legal action in the commune of Isigny-le-Buat (50). The court thus recognised the responsibility of RTE, attributing half of the damage to the passage of the Cotentin-Maine very high voltage (VHV) line near the farm.

"We won our case. This is a first, a very important decision that we can only be satisfied with," said François Lafforgue, Gaec Vauprès's lawyer, who was asking RTE for nearly € 658,000 as compensation. "This means that the link between the electrical structure and the problems encountered on the farm, such as the loss of milk production, is recognised. Other farmers can now hope to win their case too," says the Parisian lawyer. François Dufour, environmental activist and former regional councillor for Normandy, who has been following this type of case very closely since the 1990s, said: "This is a very important moment in the recognition of a causal link."

This case is similar to one from 2012 to 2014. Yves Larsonneur and Sylvie Hubert, a couple of dairy farmers from Manche, were also able to have RTE condemned after two years of fierce fighting. The conflict was sparked by the installation of two pylons of the Cotentin-Maine EHV line by RTE in the farmers' field, located in Montabot (Manche). Both had always refused the compensation offered by RTE. At the time, the Caen Court of Appeal ruled in their favour and obliged RTE to pay them some 200,000 euros in compensation for the loss of the market value of their farm. The loss of milk production was not taken into account, as is the case this time for Gaec Vauprès. (Caroline Gaujard-Larson: "Very high voltage line: the courts condemn RTE" Figaro, June 3 2022, translated with www.DeepL.com/Translator; John Sleigh: You must be kidding me - French court orders 4G turn off after 40 cow deaths" Scottish Farmer, June 8 2022; Joanna Robinson: "Orange deactivates a 4G antenna, it is accused of having killed several cows!" TTechUpdate, May 24 2022)



Germany: property owners and telecoms liable for non-thermal health harm from antennas

The District Court in Münster, Germany, clarified that property owners who rent space for base stations and mobile towers assume responsibility together with the telecom operators for any health consequences of the activity, including where the radiation is non-thermal and lower than heating standards such as ICNIRP's. According to Björn Gillberg, the same responsibility principles also apply in Sweden. The ruling also rejected the municipality's demand for an early termination of a 30-year lease for mobile base stations.

Attorney Krahn-Zembol, who represented the municipality, commented: "As even official bodies such as the European Parliament's Research Service (STOA) point out that the electromagnetic radiation [ICNIRP heating] limit values are too high by at least a factor of 10, the owner takes a liability when entering into an agreement with a mobile phone system operator in this regard. In addition, to date, almost 1,000 scientific studies, out of a total of more than 1,600 scientific studies on mobile telephony, have shown that biological effects and harmful effects occur with weaker [non-thermal] radiation than the long-obsolete [heating] limit values ... Even if telecom operators repeatedly claim to comply with the [heating] limit values when operating their facilities, this does not in any way exclude liability on their part or on the part of the property owner. On the contrary, the Federal Court (in Germany) has repeatedly stated that producers or operators cannot liberate themselves by referring to the official [heating] limit values if they know or should have known of additional [non-thermal] harmful effects, etc.. This is obvious even today, since even the majority of scientific studies show additional effects and harmful effects even though the radiation is lower than the [heating] limit values.



(Anon.: "German court finds property owners can be liable for health impacts from base station antennas on their property" Swedish Radiation Protection Foundation, July 5 2022; TBH, July 6 2022)

French court ends SpaceX's satellite license

France's Conseil d'Etat court revoked the license authorizing Elon Musk's Starlink outfit to use two



frequency bands to provide satellite internet in France. SpaceX reportedly has only one ground station left in France, in Villeneuve-d'Ornon, Girond. The other two Gateways – which were authorised between July and December 2020 – came up against local opposition. Villagers voiced concerns that the ground network gateways would affect cattle, although the ANFR claimed that it is safe and far below the regulatory limit. The associations PRIARTEM and Agir pour l'environnement had requested an annulment of the spectrum use which they were granted because of a lack of public consultation under V of Article L. 32-1 of the Post and Electronic Communications Code. Starlink offered services in France in beta since May 2021 for users with a small dish with tripod.

(Jude Karabus: "French court pulls SpaceX's Starlink license" The Register, April 6 2022)

CHD Supports Pittsfield, Mass. Residents

Lawyers for Children's Health Defense (CHD) on May 25 2022 filed a motion to intervene in the legal battle between the Pittsfield, Massachusetts Board of Health and Verizon over Verizon's refusal to remove or relocate a cell tower. The motion, filed on behalf of six Pittsfield residents, is related to a lawsuit filed earlier this month by a Verizon affiliate Pittsfield Cellular Telephone seeking to invalidate the Board of Health's April 11 2022 order to remove the tower. Lawyers on behalf of CHD have been advising Pittsfield residents for several months while the matter was before the board and are now filing in the court case to defend the board order. Specifically, lawyers representing the residents will oppose Verizon's request that the court rule the Telecommunications Act of 1996 expressly preempts the board's emergency order. (Susan Foster: "CHD Supports

Pittsfield, Mass. Residents Seeking to Intervene in Cell Tower Lawsuit Against Verizon" The Defender, May 25 2022)

First Emergency Cease & Desist Order for Verizon phone tower

Verizon paid witness: Prof. theoretical physics, 'lacks credibility', 'lacks any academic or professional qualifications' in relevant fields, 'not a medical doctor'

This case illustrates the logical problem caused by the invalidated unscientific thermal-only hypothesis based on Schwan's myth of 1953 and still used by ICNIRP, FCC, UKHSA etc:

'the position of Verizon Wireless is that what is plainly happening in Pittsfield cannot occur'

Because Schwan's 1953 myth states that non-thermal effects cannot occur, when these non-thermal effects occur, as in Pittsfield, according to Schwan's myth they cannot be occurring.

On April 6 2022, the Pittsfield Board of Health, in Massachusetts USA, voted unanimously to send a cease and desist order to shut down a Verizon cell tower if Verizon does not respond with meaningful action regarding a cell tower. The Board took action after families living in the neighbourhood of Shacktown near the tower on 877 South Street Pittsfield MA reported wireless radiation-related health issues soon after the tower became operational in 2020. The order was received by Verizon on April 7 2022. Verizon has seven days to respond. Seventeen people are reporting injuries linked to the radiation.

The Order included:

Whereas, as further documented below, the neurological and dermatological symptoms experienced by the residents are consistent with those described in the peer-reviewed scientific and medical literature as being associated with exposure to pulsed and modulated Radio Frequency ("RF") radiation, including RF from cell towers.

Whereas, those symptoms are sometimes referenced in the scientific and medical literature as electromagnetic sensitivity, also known as Electro-Hypersensitivity (EHS), Microwave Sickness, or Radiation Sickness. All these names describe a syndrome where the afflicted develop one or more recognized symptoms as a result of pulsed and modulated RF radiation. EHS is a

spectrum condition. For some, the symptoms can become debilitating, and severely affect their ability to function.

Whereas, the federal government has officially recognized this syndrome in various ways. For example, in 2002, the "Access Board," an independent federal agency responsible for publishing Accessibility Guidelines used by the U.S. Department of Justice to enforce the Americans with Disabilities Act (ADA), recognized that "electromagnetic sensitivities may be considered disabilities under the ADA.

The questions raised by the DC Circuit Court and the compelling scientific evidence submitted to this Board allows only one conclusion: pulsed and modulated RFR can and does cause harm, and at least a certain segment of the population can be severely harmed when exposed to this wireless radiation, especially for continuous periods of time. Exposure to wireless radiation can lead to significant temporary and possibly permanent injury, and according to the evidence, it seems that the most effective method to reduce the symptoms and mitigate the harm is through exposure avoidance.

18. This Board also finds that the information and testimony provided by Verizon Wireless do not convince this Board otherwise.

20. Ms. Armstrong asked Professor Swanson to explain how to deal with those [EHS] symptoms. Professor Swanson responded by insisting that the only verifiable biological effect of non-ionizing wireless radiation is heat, and the FCC so strictly regulates those emissions levels that heat cannot pose a problem from that Verizon Wireless cell

tower. Professor Swanson acknowledged that certain people truly believe that they are hypersensitive to wireless radiation. Professor Swanson maintains that transmission of wireless radiation from Verizon's cell tower cannot actually cause those persons any injury because the immutable laws of physics make that impossible.

21. This Board has reviewed Professor Swanson's presentation and discussion and finds Professor Swanson's conclusions, several of which are strident and absolute, to lack credibility.

23. ... Verizon Wireless cannot and does not adequately rebut the personal testimonies provided by the residents of the neighborhood ("Shacktown") in the City of Pittsfield adjacent to the Verizon Wireless 877 South Street wireless facility at the several public hearings before the Health Board of the actual harms they have suffered and are suffering from the operation of this wireless facility. Simply stated, the position of Verizon Wireless is that what is plainly happening in Pittsfield cannot occur. That position has been stated most clearly by Professor Swanson during his September 9, 2021 presentation to this Board. But this Board finds that, in fact, Shacktown residents have suffered, and are continuing to suffer, negative health effects from the continuous operation of the Verizon Wireless 877 South Street wireless facility since it was activated in August 2020.

("Cease and Desist Order for Verizon Cell Tower by Board of Health Pittsfield MA" EHT, April 7 2022; Courtney Gilardi: "Statement by Courtney Gilardi after Pittsfield Board of Health votes to send Cease and Desist order for Verizon cell tower" EHT, April 7 2022)



Americans disabled by RFR

“The FCC is supposed to protect Americans from the telecom industry. ... 50+ groups have now filed comments with the FCC demanding that these Americans have access to hardwired internet connections.”

(B.N.Frank: “Groups Urge FCC to “prevent and eliminate digital discrimination” by Providing Wired Broadband to Americans Disabled by Wireless” Massive News, June 1 2022)

Comments to FCC: RF-free ‘safe zones’

Conclusion: “The Commission should always prioritize “fiber to the premise” (FTTP) solutions ... Those who are RF-sensitive and especially those with EMS disabilities must be allowed equal access to broadband in a form that does not threaten or worsen their health and well-being. They should be able to obtain FTTH as a matter of right. There must be an allowance for RF-free

“safe zones” in public spaces ... Those who cannot be around RF must have the ability, as a matter of right, to obtain wired (fiber-based) broadband.”

(Mary Holland, W. Scott McCollough: “Comments of Advocates for the EMS Disabled in Response to Notice of Inquiry” FCC Submission, In the Matter of: Implementing the Infrastructure Investment and Jobs Act: Prevention and Elimination of Digital Discrimination” GN Docket No. 22-69, May 17 2022)

‘RF-free zones: EMS-disabled to rejoin society’

“Now with the Justice40 Initiative, the FCC has the opportunity to rectify this inequality for the disadvantaged communities of the EMS disabled. It can serve a significant role by ... encouraging the development of RF-free zones in public areas and near residences so the EMS disabled can once again have a safe home environment and rejoin the rest of society.”

(Susan Foster and Odette J. Wilkins: “Eliminating Digital Discrimination For the EMS Disabled” May 2022)

<p>Electrosensitivity UK (ES-UK) www.es-uk.info Aims: 1. To help people suffering from Electrosensitivity (ES). 2. To educate the public about ES and related areas. <i>Registered Charity No.: 1103018</i> <i>Founded 2003</i> BM Box ES-UK, London, WC1N 3XX Telephone: 0845 643 9748 enquirers@es-uk.info</p>	<p>Support ES-UK Paypal (on the website) Cheques to: Electrosensitivity UK, to: The Treasurer, BM Box ES-UK, London, WC1N 3XX <i>from whom you can obtain Standing Order, Direct Debit, Gift Aid and Legacy declaration forms.</i> Please donate £20 or more per year for printed newsletters and general support of the charity if you can afford it.</p>	<p>Trustees: Michael Bevington (chair) Sarah Dacre, Brian Stein CBE Dr Andrew Tresidder, Phil Watts Medical Advisers Dr Dietrich Klinghardt Dr Erica Mallery-Blythe Scientific Advisers Dr Andrew Goldsworthy Professor Emeritus Magda Havas Professor Emeritus Denis Henshaw Professor Associate Olle Johansson</p>
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Resources available at: www.es-uk.info:
 ▪ [Letters to doctors and psychiatrists on Electrosensitivity](#), by Dr Andrew Tresidder
 ▪ [Resources: Disability, Guidelines, Housing, Planning, Public Health, Shielding.](#) ▪ [ES Directory \(suppliers\)](#) ▪ [ES-UK Leaflet](#)
 ▪ [ES and EHS: A Summary](#) (2013) ▪ [Selected ES and EHS Studies](#) (studies with links) ▪ [Newsletters](#) (including past copies)

Newsletter: Mailing: S Dacre. Contributions: editor@es-uk.info; M Bevington, Newsletter Editor, BM Box ES-UK, London, WC1N 3XX

ABBREVIATIONS: CONDITIONS		METRICS, NON-THERMAL		PHYSICAL AGENTS	
CFS	chronic fatigue syndrome	G-S	Graham-Stetzer (<i>transients</i>)	CME	coronal mass ejection (<i>geomagnetic field</i>)
EHS	electromag. hypersensitivity	Hz	Hertz (<i>frequency, cycle per sec</i>)	EF	electric field
EI	environmental intolerance	kHz	kiloHertz (<i>frequency</i>)	ELF	extremely low frequency
ES	electrosensitivity	mG	milliGauss (<i>magnetic field</i>)	EMF	electromagnetic field
FI	functional impairment	MHz	megaHertz (<i>frequency</i>)	GEC	global electrical circuit (<i>atmospheric electricity</i>)
HS	Havana (EHS) Syndrome	nT	nanoTesla (<i>magnetic field</i>)	MF	magnetic field
MCS	multiple chemical sensitivity	THz	teraHertz (<i>frequency</i>)	RFR	radio frequency radiation
ME	myalgic encephalomyelitis	V/m	Volts per metre (<i>electric field</i>)	VHF	very high frequency
MS	multiple sclerosis		METRICS, THERMAL	VLF	very low frequency
MWS	microwave sickness				PRINCIPLES
	DEVICES				
ATA	analogue telephone adaptor	dBm	decibel-milliWatts (<i>each 3: x2</i>)	ALARA	as low as reasonably achievable
CLF	compact fluorescent light	SAR	specific absorption rate (<i>heat</i>)	NOEL	no observable effect level
LED	light-emitting diode	uW/m ²	microWatt per metre squared (<i>power density, heating</i>)	PP	precautionary principle
ONT	optical network terminal	W/kg	Watts per kilogram (<i>SAR heat</i>)		

ELECTROSENSITIVITY: KEY FACTS

CONSCIOUS SPECIFIC SYMPTOMS

- Anxiety
- Asthma
- Cancer
- Confusion
- Cramp
- Depression
- Diarrhoea
- Dizziness
- Fatigue
- Hair loss
- Headache, brain pain
- Heart palpitations
- Indigestion
- Irritability
- Light sensitivity
- Memory loss
- Menstrual changes
- Muscle/nerve pains
- Nausea
- Noise sensitivity
- Nosebleeds
- Restless legs
- Sinusitis
- Skin rashes
- Sleep disturbance
- Smell sensitivity
- Thirst, Tics, Tinnitus
- Visual effects

SUBCONSCIOUS SYSTEMIC EFFECTS

- Brain wave disturbance, especially Alpha
- Cell cycle disturbance, mitochondrial dysfunction
- Cell membrane depolarisation, ion channel effects
- DNA cancerous double- and single-strand breaks
- Heart: changes to rate, variability, cerebral perfusion
- Immune system changes: chronic inflammation
- Nervous (peripheral and central) system effects:
 - Demyelination, axonal and microglia
 - Hippocampus: enzymes, proteins
 - Hormonal: cortisol, testosterone
- Reproduction: infertility, changes in offspring
- Skin: mast cell degranulation, allergic sensitivity

CAUSES

- Bluetooth, TETRA, Wifi
- CFLs, LEDs, transients
- Cordless DECT phones
- Mobile phones, masts
- Powerlines, transformers
- Smart meters, Fitbits

MECHANISMS

- Cilia. Cryptochromes
- Demyelination. DNA signalling
- Genetic variants. Glial/synapses
- Magnetite. Pineal gland
- Radical pair mechanism
- Voltage-gated ion channels

PATHWAYS

- Antioxidant glutathione. Metabolism
- Hormones: melatonin, thyroid
- Metal implants, dental amalgam, fluoride
- Oxidative stress (like ionising radiation)
- Protein expression: Hsp70, ERK etc.
- Signalling pathways: calcium flux, ions

ILLNESS AND FUNCTIONAL IMPAIRMENT FROM EHS

- Electrical Hypersensitivity (EHS), established since 1746, is an environmental systemic spectrum syndrome.
- Its cause is the patient's exposure to RFR/EMF.
- It makes people ill with a wide range of symptoms which vary as the condition and its causes change in severity.
- Symptoms are disabling, causing functional impairment under the Health & Safety 1974 and Equality 2010 Acts.
- Clinical history: cause/effect from exposure/symptoms.
- The absence of symptoms when the RFR/EMF source is removed (positive reverse provocation testing).
- Multiple biomarkers, but only a few may be elevated or suppressed, depending on the precise stage of the illness.
- Brain perfusion and fMRI scans, where the potential benefits outweigh the health risk of an MRI scan.

EHS SYNDROME: CLINICAL DIAGNOSIS

PREVALENCE IN UK 67m POPULATION

- 0.65%, 435,500 people: work restricted because of EHS
- 1.2%, 800,000 people: severe electrical hypersensitivity
- 3.6%, 2.4m people: moderate electrical sensitivity
- 100% subconsciously sensitive (80% chronic inflammation).
- Avoid RFR/EMF: e.g. mobiles, smart meters, Wifi
- Keep 10m from people using a mobile phone
- Live: 500m from masts, 600m from powerlines
- Protect sleep: e.g. military nets, shielded rooms

TREATMENT: AVOIDANCE OF RFR/EMF

NON-IONISING (RFR/EMF) and IONISING RADIATION

Both cause oxidative stress and cancer; sensitivity varies. 24 hours of mobile phone harms DNA like 1,600 X-rays. Both: primary non-thermal effects, thermal secondary. Both: hormetic (change low/high dose), no threshold.

RESEARCH INTO ES AND EHS

Started in 1730, Royal Society London. Centres include: ARTAC Paris, Breakspear Herts, EMC Dallas USA, DARPA Caltech USA, HUSM Lleida, CES Moscow, UC San Diego USA, Toronto WCH, JMU Virginia, USA.

ICD-10 CODES

- ICD-10: W90.0 – RFR; W90.8 – ELF, etc for Its cause.
- EHS, known since 1746, still lacks its own ICD-10 code.

W.H.O. STATEMENTS ON EHS AND EPh

Backgrounder 296 (2005) states EHS can be disabling, but is outdated and wrong on aetiology, confusing two different conditions, EPh (IEI-EMF) and EHS.

EPh: DIFFERENT CONDITION FROM EHS

Psychological Electrophobia (EPh, nocebo effect, IEI-EMF), known since 1903, affects 1% of EHS people. EPh's prior conditioning cannot apply to EHS children and unaware adults. 'Front' groups confuse EPh with ES.

NATURAL RFR/EMF EFFECTS

All life in the Earth's biosphere is electrically sensitive to natural geomagnetic and global electrical circuit changes at levels far below most man-made electrosmog.

ELECTROSENSITIVITY: KEY FACTS

MAINSTREAM NON-THERMAL & THERMAL SCIENCE

- scientifically based proof, from evidence
- established long-term and short-term non-thermal and heating adverse effects, known since 1733
- protective: prevents ES symptoms, e.g. cancer, EHS
- protective of all wildlife in earth's biosphere
- mainstream, independent, unbiased scientists.

INTERNATIONAL SCIENTIFIC GUIDELINES

Bioinitiative 2012, Building Biology (sleeping areas) 2015, EUROPAEM 2016, IGNIR 2018, Seletun 2010

IMPARTIAL MAINSTREAM ORGANISATIONS USING ESTABLISHED SCIENTIFIC EVIDENCE

These organisations include experts on real ES.

- Bioinitiative Group <https://bioinitiative.org>
 EHT: Environmental Health Trust, USA <https://ehtrust.org>
 EMF Scientist: International EMF Scientist Appeal [link](#)
 EPA: Environmental Protection Agency, USA
 ES-UK: Electrosensitivity UK <https://www.es-uk.info>
 EUROPAEM: European Academy for Environmental Medicine [link](#)
 IARC: International Agency for Research on Cancer [link](#)
 IEMFA: International EMFs Alliance <https://www.iemfa.org>
 IGNIR: International Guidelines on Non-Ionising Radiation <https://ignir.org>
 NTP: National Toxicology Program, USA [link](#)
 PHIRE: Physicians' Health Initiative for Radiation and Environment <https://phiremedical.org>

ARBITRARY, UNSCIENTIFIC THERMAL-ONLY CLAIM

- arbitrary and unscientific claim: no proof, no evidence
- based on Schwan's invalidated short-term heating-only myth of 1953, confirmed as unscientific in 1957
- unprotective, allowing ES symptoms e.g. cancer, EHS
- unprotective of all wildlife in earth's biosphere
- used as a 'front' for the radiation industry cartel.

ARBITRARY, UNPROTECTIVE THERMAL GUIDELINES

FCC 1998, ICNIRP 2020

'FRONT', 'SHAM' AND SINGLE-VIEWPOINT GROUPS INCLUDING USE OF ARBITRARY EVIDENCE, UNPROVEN DENIALS, 'JUNK' OR FLAWED SCIENCE

No experts on real ES, only on the different condition EPh.

- COMARE: Committee on Medical Aspects of Radiation and the Environment, UK
 FCC: Federal Communications Commission, USA
 GLORE: Global Coordination of Research and Health Policy on RF EMFs
 ICNIRP: International Commission on Non-Ionizing Radiation Protection
 UKHSA: Health Security Agency; Public Health England (1990-2017: PHE's AGNIR: Advisory Group on Non-Ionising Radiation) part of
 DHSC: Department for Health & Social Care, Ofcom
 WHO: World Health Organisation, EMF Project
 1959: WHO legally subject to the IAEA (Int. Atomic Energy Agency), itself subject to Int. Comm. on Radiol. Prot.

Radio Frequency Radiation Guidelines							
	Background level	Non-thermal and Thermal Long- and short- term, 4 - >24 hours. Peak			Thermal only Short- term only, 6 - 30 minutes. Averaged		
	Safe	Scientific, Protective, Humans and Wildlife			Arbitrary, Unscientific, Unprotective, no Wildlife		
	Johansson et al. 1997	USSR 1935	Bioinitiative 2012	EUROPAEM, IGNIR 2016, 2018	USA Schwan 1953	USA, ICNIRP 1982, 1998	ICNIRP 2020
V/m	~ 0.0000002	6	0.03 - 0.05	≤ 0.002 - 0.2	194	61	≤ 123
uW/m ²	~ 0.0000000001	100,000	3 - 6	1 - 100	100,000,000	10,000,000	≤ 40,000,000
dbm	< -90	-1	-46 to -43	≤ -70 to -31	+ 29	+ 19	≤ + 25
W/kg	< 0.00002	Seletun	2010	0.0003	1980, 1984	0.08 whole body, 1.6/2.0 head, 4.0 limbs	

HISTORY: SCIENCE

- 1733: ES: non-thermal adverse symptoms, EMF
 1746: EHS: hypersensitivity specific symptoms, EMF
 1893: ES: specific non-thermal adverse symptoms, RFR
 1930: Non-thermal effects primary, heating secondary
 1932: EHS: hypersensitivity specific symptoms, RFR
 1945: ES symptom of cancer from non-thermal RFR
 1945: Non-thermal RFR used by military in warfare
 1991: ES shown in provocation tests, screened subjects
 2014: Genetic variants associated with EHS
 2015: Cerebral blood hypoperfusion in people with EHS
 2017: 3d fMRI scans show brain damage in EHS people
 2018: NTP study confirms mobile phones cause cancer

HISTORY: REGULATORY

- 1935: First RFR guidelines, non-thermal and thermal
 1974: Health & Safety at Work Act protects ES workers
 1990s: Insurers: RFR high risk only, like cancer asbestos
 2001: IARC classifies ELF EMF as a 2B cancer agent
 2002: WHO/ICNIRP recognise 'sensitive' ES people
 2006: UK employers remove RFR for ES people
 2010: Equality Act protects people disabled by ES
 2011: IARC classifies RFR EMF as a 2B cancer agent
 2012: NHS GPs and consultants diagnose real ES
 2012: Courts accept ES and award compensation/fines
 2013: H&SC Act: local authority duty to improve health
 2021: Court: ES person is interested party in siting mast

E(H)S = Electromagnetic (Hyper)sensitivity EMF = Electromagnetic Field(s) RFR = Radio Frequency Radiation