

Lemos, June

From: Annemarie <aweibel@mcn.org>
Sent: Monday, August 12, 2019 11:02 AM
To: Lee, Will; Peters, Lindy; Morsell-Haye, Jessica; Albin-Smith, Tess; Norvell, Bernie; Miller, Tabatha; Lemos, June
Subject: please postpone the public hearing about item # 7
Attachments: MendocinoSites.jpg

To city council and city manager,

Please postpone the public hearing about item # 7 until the council and planning commission have additional information and the public has a chance to get more information. To be talking about fees when the issue should focus on the purpose, safety and location of small wireless facilities and possible ongoing use of City Rights-of-Way for small wireless facilities is putting the cart before the horse.

During the Special City Council meeting on April 12, 2019 the topic was:

Introduction and Adoption of Urgency Ordinance to Adopt Aesthetic Guidelines for Wireless Telecommunications Facilities in the City of Fort Bragg. To a layperson it sounds good to have aesthetics considered when dealing with telecommunications facilities, but adding to the already huge network of wireless communication facilities in the county additional ones in Fort Bragg close to where people shop, push strollers, where children walk, and people gather is not a good idea.

Many peer reviewed studies warn of the dangers to people, plants & animals. Additionally we are also bombarded from satellites that are launched into low Earth orbit.

You were asked by Jacob Turner of SeaKay (provider of high-speed internet service) to not consider a building-mounted mast that is 12 ft.

in height and 6 in. in diameter a telecommunications tower. Further Reach is also providing services. The map that AT&T provides to the County lists 20 existing towers and 14 planned towers. With the Connect America Fund AT&T was going to install 18 towers with federal grant money. Verizon is busy installing their microwaves transmitters.

We need fiber-optic cables versus cell towers that helps with our telephone system, the cable TV system and the Internet. They are a viable alternative, are completely safe (and at least 100 times faster than WiFi), and will be well worth the time and effort needed to install.

Shay Wachtel requested more education on 5G to inform the public and others suggested to provide education to the public regarding wireless telecommunications facilities and provide sources where people can obtain more information. It was also suggested that the distance to residential and school locations and the effects of wireless on humans should be considered.

What has the city done before and after?

I did see an application for a "dig once" policy to minimize the # and scale of excavations when installing telecommunications infrastructure in rights of way that was approved by the Public Works & Facilities Committee on July 10.

The April 22, 2019 City Council discussed Mendocino's County Digital Infrastructure Plan 2019-2025. The plan lists to also develop fiber-based technology. The council adopted the RESOLUTION NO. 4160-2019 RESOLUTION OF THE FORT BRAGG CITY COUNCIL ADOPTING THE MENDOCINO COUNTY DIGITAL INFRASTRUCTURE PLAN 2019-2025 PREPARED BY THE ECONOMIC DEVELOPMENT & FINANCING CORPORATION. I was glad to read that "there is a preference for high-speed internet to be delivered through underground fiber instead of wireless delivery".

<https://city.fortbragg.com/DocumentCenter/View/9709/4160-2019?bidId=>

On July 22 during public comment I shared with the city council my concern about radio frequency electromagnetic fields. I asked the council to consider having a joint meeting (for City Council & Planning Commission) where Dafna Tachover would educate both groups about EMF's, wireless vs. wired telecommunication facilities and 5G. In the past couple of months Dafna gave over 20 public lectures. She gave lectures to private groups and met, spoke with and consulted with local activists groups. She also met with numerous mayors, city council members, city attorneys and city managers. Dafna is busy traveling between Israel, New York & the Bay area.

I also on the same day talked to Will Lee, Jessica Morsell-Haye and Michelle Roberts. Both Michelle & Jessica were going to talk to the city manager and follow up on the issue. Dafna Tachover is willing to give a presentation to the City Council and the Planning Commission.

I have not heard if anyone contacted Dafna Tachover. She is invited to speak at the international environmental conference "Soil not Oil" that will be held in San Francisco on Sept. 9-10 at the Grey Area Theater. This is their 5th annual conference.

This is the first time the conference will be addressing the impact of 5G and wireless "smart" technology on the environment, including on humans, plants, animals and the climate.

You can imagine my surprise when I read that the topic for today's public hearing (item #7) is to Receive Report, Conduct Public Hearing and Consider Adoption of City Council Resolution Adopting Fees for Services Related to Processing Applications for Small Wireless Facilities and Ongoing Use of City Rights-of-Way for Small Wireless Facilities. Are we talking 4G or 5G?

I am in favor of doing what has been suggested:

Providing more education on 5G to inform the public and provide education to the public regarding wireless and provide sources where people can obtain more information considering the distance to residential and school locations and consider the effects of wireless on humans.

Please postpone the public hearing about item # 7 until the council and planning commission have additional information and the public has a chance to get more information.

The following is from <https://www.5gspaceappeal.org/the-appeal>
INTERNATIONAL APPEAL to Stop 5G on Earth and in Space

"Governments are also enacting laws to make wireless facilities a permitted use in all public rights-of-way.[113] To date, most wireless facilities have been located on private property at some distance from homes and businesses. In order for them to be spaced less than 100 meters apart as required by 5G, however, they will now be located on the sidewalk directly in front of homes and businesses and close above the heads of pedestrians, including mothers with babies.

Public notice requirements and public hearings are being eliminated.

Even if there were a hearing and 100 scientific experts were to testify against 5G, laws have been passed making it illegal for local authorities to take their testimony into consideration. US law, for example, prohibits local governments from regulating wireless technology "on the basis of the environmental effects of radio frequency radiation"[114] and courts have reversed regulatory decisions about cell tower placement simply because most of the public testimony was about health.[115] Insurers will not provide coverage against EMF risks,[116] and there is zero clarity as to what entity will bear legal responsibility for damage to life, limb and property arising from exposure to 5G, whether ground- or space-based.[117]

In the absence of an agreed comprehensive legal regime governing activities in outer space, legal liability for those activities is non-existent, despite the prospect of whole continents, the atmosphere and the oceans being put at risk by them."

For complete text & footnotes see links at <https://www.5gspaceappeal.org/the-appeal>

As of September 13, 2017 more than 180 scientists and doctors from 35 countries warned of potential serious health effects of microwave radiation health risks, including that arising from 5G wireless cell tower antennas and recommended a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry.

They also noted that: "5G will substantially increase exposure to radio frequency electromagnetic fields (RF-EMF) on top of the 2G, 3G, 4G, Wi-Fi, etc. for telecommunications already in place. RF-EMF has been proven to be harmful for humans and the environment."

See the full text of their well-educated and researched warning to the general public about cell tower antennas here: <http://emfsafetynetwork.org/wp-content/uploads/2017/11/Scientist-5G-appeal.pdf>

Senate Bill (SB) 649 was not signed by Jerry Brown, but this is what was in the text. So how come city's are making money with this technology?

This bill would provide that a small cell, as defined, is a permitted use, subject only to a specified permitting process adopted by a city or county, if the small cell meets specified requirements. By imposing new duties on local agencies, this bill would impose a state-mandated local program. The bill would authorize a city or county to require an encroachment permit or a building permit, and any additional ministerial permits, for a small cell, as specified. The bill would authorize a city or county to charge 3 types of fees relating to these small cells: an annual charge for each small cell attached to city or county vertical infrastructure, an annual attachment rate, and a one-time reimbursement fee. The bill would require the city or county to comply with notice and hearing requirements before imposing the annual attachment rate. The bill would require an action or proceeding to challenge a fee imposed under the provisions of this bill to be commenced within 120 days of the effective date of the ordinance or resolution. This bill would require each wireless service provider, on or before July 1, 2019, and again on or before December 31, 2020, to submit a report to the Legislature specifying the number of, and geographical location by ZIP Code of, the small cells that the wireless service provider has commenced operating within the state during the 18 months preceding the date of each report.

Thanks for the consideration of my request, Annemarie Weibel

P.S.: Contact information for Dafna Tachover:

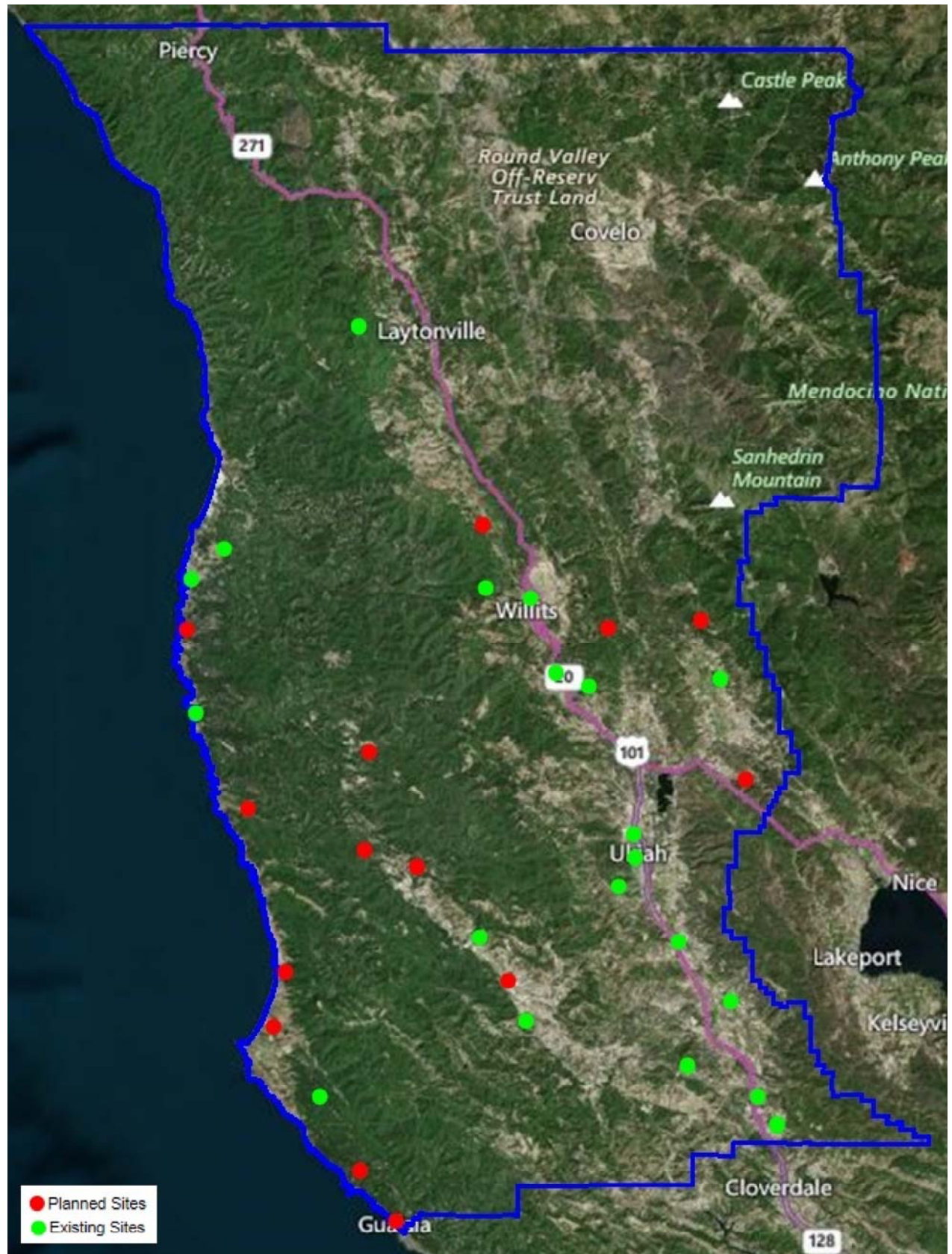
Dafna Tachover, Managing Director

Attorney (NY, Israel), MBA

phone: (845) 377 0211

<<http://WeAreTheEvidence.org>>

I attached the map that AT&T provides to the County (planned & existing sites).



Lemos, June

From: Annemarie <aweibel@mcn.org>
Sent: Monday, August 12, 2019 3:13 PM
To: Peters, Lindy; Lee, Will; Jessica Ballard; Norvell, Bernie; Albin-Smith, Tess; Miller, Tabatha; Lemos, June
Subject: What You Need To Know About 5G Wireless and "Small" Cells, please postpone the public hearing about item # 7
Attachments: What you need to know about 5G & small cells.jpg; 2 What you need to know about 5G & small cells.jpg

To city council members & city manager,

Please read this handout and consider not voting on item #7 tonight until you have had a chance to understand this new technology.

What You Need To Know About 5G Wireless and "Small" Cells

Thanks, Annemarie



What You Need To Know About 5G Wireless and “Small” Cells

“We recommend a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry...RF-EMF has been proven to be harmful for humans and the environment.”

— 2017 5G Scientific Appeal (signed by more than 200 scientists and doctors from 35 countries)

Nationwide, communities are being told by wireless companies that it is necessary to build “small cell” wireless facilities in neighborhoods on streetlight and utility poles in order to offer 5G, a new technology that will connect the Internet of Things (IoT). At the local, state, and federal level, new legislation and new zoning aim to streamline the installation of these 5G “small cell” antennas in public rights-of-way.

The radiation from small cells is not small: Wireless antennas emit microwaves — non-ionizing radiofrequency radiation — and essentially function as cell towers. Each installation can have over a thousand antennas that are transmitting simultaneously.

Millions of small cells to be built in front yards: The Federal Communications Commission estimates that millions of these wireless transmitters will be built in our rights-of-way, directly in front of our homes.

5G will add to — not replace — our current wireless technology: 5G will not only utilize current 3G and 4G wireless frequencies already in use but also add higher frequency — submillimeter and millimeter waves — in order to transmit data at superfast speeds.

Community authority is overruled: Communities are being stripped of their right to make decisions about this new technology. “Streamlining” means almost automatic approval. Public notice and public hearings are being eliminated. Even if every homeowner on the block opposes the antennas on their street, the opposition will be disregarded.

Scientists worldwide are calling for a halt to the 5G Roll-out: Over 200 scientists and doctors issued a declaration calling for a moratorium on the increase of 5G cell antennas citing human health effects and impacts to wildlife.

[Read the 2017 Scientific Appeal on 5G To the European Commission](#)

[Read the 2015 EMF Scientist Appeal to the United Nations](#)

[Read Letters From Dozens of Scientists on Health Risks of 5G](#)

Cumulative daily radiation exposure poses serious public health risks: Peer reviewed, published science indicates that exposures to wireless radiation can increase cancer risk, alter brain development and damage sperm. Most people are unaware that wireless technology was never tested for long-term safety, that children are more vulnerable and that the accumulated scientific evidence shows harm.

Decreased property values: Studies show property values drop up to 20% on homes near cell towers. Would you buy a home with a mini cell tower in the yard? [Read research showing decreased property value from cell towers near homes.](#)

Microwave antennas in front yards present several worker and public safety issues: Unions have already filed comments that workers were injured, unaware they were working near transmitting antennas. How will HVAC workers, window washers, and tree cutters be protected? The heavy large equipment cabinets mounted on poles along our sidewalks also present new hazards. Cars run into utility poles, often, what then? [US Dept of Labor letters on cell tower safety](#)

Fiber is the safe alternative: Worldwide, many regions are investing in wired fiberoptic connections which are safer, faster, more reliable, provide greater capacity, and are more cyber-secure. Read [“Re-Inventing Wires: The Future of Landlines and Networks,”](#) by the National Institute for Science, Law & Public Policy

www.ehtrust.org

All text in this document in blue is hyperlinked to resources for more information.

Please also see <https://ehtrust.org/factsheet-need-know-5g-small-cells-science-policy-public-health/> for additional resources.

KEY RESEARCH AND REPORTS

5G Frequencies Are Absorbed Into the Skin

Physicists found that the higher millimeter frequencies intended for 5G use are preferentially absorbed into the sweat duct at much higher rates than other organ tissues. Read two published studies "[The Modeling of the Absorbance of the Sub-THz Radiation by Human Skin.](#)" [The human skin as a sub-THz receiver – Does 5G pose a danger to it or not?](#) Paul Ben-Ishai, PhD Lecture.

5G Frequencies Are Used As Weapons

Millimeter frequencies have the capacity to cause a severe burning sensation in the skin and are used by the U.S. Department of Defense in [crowd control guns](#) called [Active Denial Systems](#).

Landmark US National Toxicology Program (NTP) Study Finds "Clear Evidence of Cancer" and DNA Damage

The NTP [studies found](#) male rats exposed for two years to cell phone radiation developed significantly increased gliomas (brain cancer) and schwann cell tumors, the very same types of tumors increased in long-term human cell phone users. NIH/ NTP [presentation on DNA](#) results states "exposure to RFR has the potential to induce measurable DNA damage under certain exposure conditions." [Press Coverage](#), [Peer Review Report](#)

Cell Tower Radiation is Linked To Damage in Human Blood

A published study compared people living close and far from cell antennas and found people living closer to cellular antennas had changes in blood that predicts cancer development. Read [Zothansiana et al, 2017](#). Read a [Compilation of Research on Cell Tower Radiation](#)

Published Scientific Review on 5G Finds Adverse Effects

Scientific literature documents evidence of nonthermal cellular damage from wireless radiation used in telecommunications to DNA integrity, cellular membranes, gene expression, protein synthesis, neuronal function, the blood brain barrier, melatonin production, sperm damage and immune dysfunction. [Russell 2018](#)

Cellular Radiation Negatively Impacts Birds and Bees

Published research finds the frequencies alter bird navigation and disturb honeybee colonies. [Research on EMF and Bees](#). [Research on Wildlife](#)

RESOURCES

Research on 5G and Cell Tower Radiation

A 5G Wireless Future: Will it give us a smart nation or contribute to an unhealthy one?" Santa Clara Medical Association Bulletin, Cindy Russell MD, 2017

Letters by Scientists in Opposition To 5G Research on Cell Tower Radiation, 2017

Biological Effects from Exposure to Electromagnetic Radiation Emitted by Cell Tower Base Stations and Other Antenna Arrays, Levitt and Lai, 2010

Radiofrequency radiation injures trees around mobile phone base stations, Waldmann-Selsam et al., 2016

Department of Interior Letter on the Impact of Cell Towers on Migratory Birds, Willie R. Taylor Director, Office of Environmental Policy and Compliance, 2014

Anthropogenic radiofrequency electromagnetic fields as an emerging threat to wildlife orientation, Balmori, 2015

Briefing Memorandum On The Impacts from Thermal and Non-thermal Non-ionizing Radiation to Birds and Other Wildlife, Manville, 2016

Database of Worldwide International Policy To Reduce EMF

Youtube Scientific Videos on 5G

TAKE ACTION

Contact local, state and federal elected officials in person.

Share this information with your friends, family and community.

Ask for government policy that reduces RFR exposure to the public.

Citizens in all states must organize and take action to halt legislation that increases cell antennas in neighborhoods.

LEARN MORE

[Federal Legislation To Know](#)

[US States With Streamlining Bills](#)

5G Small Cell Antennas To Be Placed On:

- Street lights
- Trashcans
- Utility poles
- Bus stops
- Sides of buildings

5 Reasons Why Small Cells Are Not Small

- Increased radiation near homes
- Refrigerator-sized equipment cabinet
- Drop in property values
- Taller poles
- Fixtures weigh hundreds of pounds

Crown Castle's 2016 10-K Annual Report says:

"If radio frequency emissions from wireless handsets or equipment on our wireless infrastructure are demonstrated to cause negative health effects, potential future claims could adversely affect our operations, costs or revenues... We currently do not maintain any significant insurance with respect to these matters."

[Read warnings](#) from Crown Castle, Verizon and other wireless companies.

The American Academy of Pediatrics says:

"An Egyptian study confirmed concerns that living nearby mobile phone base stations increased the risk for developing:

- Headaches
- Memory problems
- Dizziness
- Depression
- Sleep problems"

AAP on [Cell Towers](#)

Letter from oncologist Lennart Hardell MD & Colleagues:

"There is a substantial body of evidence that this technology is harmful to humans and the environment. The 5G millimeter wave is known to heat the eyes, skin and testes... Of particular concern are the most vulnerable among us — the unborn, children, the infirm, the elderly and the disabled. It is also expected that populations of bees and birds will drastically decline."

[2017 Scientific Letter](#)

Peer Reviewed Research Studies on Radiofrequency Radiation Have Found:

- Headaches
- Sperm damage
- Altered brain development
- Depression
- Neurological symptoms
- Hormone changes
- Memory problems
- Sleep problems
- Cancer

Science:

[BioInitiative 2012 Report by Independent Scientists](#)
[Dr. Moskowitz, University of California at Berkeley](#)
[Dr. Lennart Hardell Örebro University Sweden](#)
[The Baby Safe Project](#)
[WhatIs5g.info](#)

[Physicians for Safe Technology](#)
[Environmental Health Trust 5G Resources](#)

www.ehtrust.org

 ENVIRONMENTAL
HEALTH TRUST

Solutions

We recommend prudent avoidance of EMFs, which means being cautious, sensible, and reducing or avoiding EMFs when and where you can.



- Use a corded landline for your home and work place. *(remove cordless phones)*
- Use analog utility meters on your home. *(remove smart meters)*
- Use a wired router for internet connection for faster and safer service. *(avoid wi-fi)*



- Reduce cell phone use. Keep cell phones away from your body. Keep cell phones away from children. *(Best to use cell phones for emergencies only)*



- Learn more safety tips: www.emfsafetynetwork.org/safety-precautions/



Oppose 5G! 5G would add another layer of harmful radiation in our homes and communities. <https://goo.gl/Hj4XrV>

EMF Safety Network mission is to educate and empower people by providing science and solutions to reduce EMFs to improve lives, achieve public policy change, and obtain environmental justice.

Become a member! Membership dues are \$50 annually. To pay by check mail to EMF Safety Network or donate on our website.



PO Box 1016
Sebastopol CA, 95472
(707) 827-0109

www.emfsafetynetwork.org

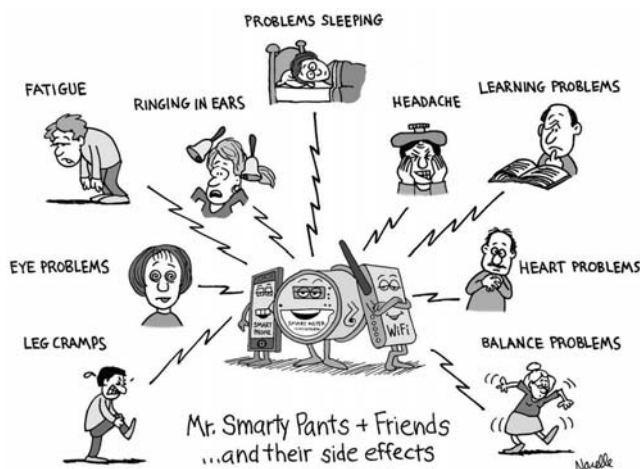
EMF Safety Network is a sponsored project of Ecological Options Network (EON) a 501 (c)(3) not-for-profit organization.

What are EMFs?



EMFs are electromagnetic fields. They include electric and magnetic fields, and wireless radiation emitted by cell towers, cell and cordless phones, smart meters, smart grid, wi-fi, computers, power lines, fluorescent lights, indoor wiring, appliances, cars, inverters and other electronic devices.

Why are EMFs a problem?



EMFs can cause fatigue, headaches, sleep problems, anxiety, ringing in the ears, heart problems, learning and memory disorders, fertility problems, electrosensitivity, increased cancer risk and more. Children, the ill, and the elderly are more vulnerable.

EMFs are now so common and widespread that they've become environmental pollution.

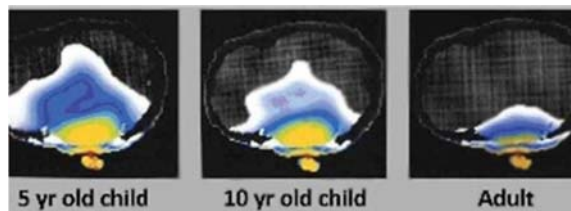


Studies show wireless radiation harms nature: birds, bees, and trees.

"Man-made electromagnetic fields impact all living organisms. We must reduce our dependence on wireless technologies."

Marie-Claire Cammaerts, PhD, Belgium

Studies show children's brains absorb more radiation than adults'



Brain scans of radiation absorption at different ages. Reprinted from O. Gandhi et al., IEEE Transactions on Microwave Theory & Techniques, 1996.

"The harmful effects of electromagnetic fields, regardless of their frequencies, are now scientifically settled. Pregnant women (the fetus) and children and adolescents are particularly vulnerable." Dominique Belpomme, MD, France

Aren't EMFs regulated by the government? Many common EMF devices sold today have not been proven safe for long term exposure. The Federal Communications Commission (FCC) safety guidelines are outdated. The FCC is promoting rapid expansion of higher frequency (5G) cell towers in our communities. The FCC cannot be relied on to protect public health or the environment.

Learn about the science: The International Agency for Research on Cancer at the World Health Organization classifies EMFs as possible carcinogens. <https://goo.gl/9DQC6M>

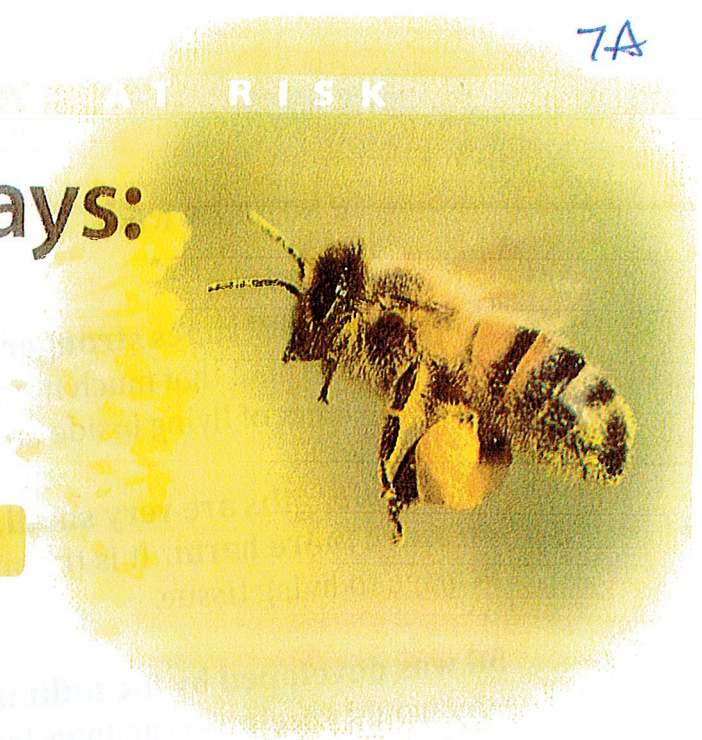
The National Toxicology Program found clear evidence of cancer in rats from exposure to cell phone frequencies. <https://goo.gl/jgh5kf>

The BioInitiative Reports reference more than 3,800 peer-reviewed published studies. The authors conclude that EMFs jeopardize global health and recommend stricter biologically-based standards and lower exposure limits. www.bioinitiative.org

Independent scientists who have published peer-reviewed studies on EMFs signed the International Scientists Appeal, which calls for greater public and environmental protections from EMF exposure. www.emfscientist.org

The Honey Bee says: **STOP5G**

5th Generation Wireless Technology



Headline News

The harmful effects of EMFs on nature are scientifically based and have been under-reported for over a decade. Here are *just a few* facts most people would like to know.

- **Technology is quite literally destroying nature.** . . with electromagnetic radiation from power lines and cell towers. . . 5G could increase threat. *Newsweek*, 2018
- **180 scientists and doctors from 35 countries** have signed a recommendation for a **5G moratorium**.
- **5G increases body temperature of insects.** *Pro Natura*, 2019
- **A \$30 million US National Toxicology Program (NTP)** study in 2018 found "clear evidence" that cell phone radiation is **linked to cancer**.
- **... unprecedented exposure interferes with the natural functioning** of humans, animals, and plants.
Dr. Ulrich Warnke: *Bees and Mankind: Destroying Nature by 'Electrosmog'*, 2009
- **"Birds disappearing mysteriously. . . bees under threat.** . . . increasing evidence EMF pollution such as cell towers, cell phones, cordless phones and wifi is a factor."
Dr. Andrew Goldsworthy, 2009 *The Birds, the Bees and EMF Pollution*
- **EMFs can cause cancer.**
(Hardell and Carlberg, 2018) (Soffritti, 2016) (Peleg, 2018)
- **Electromagnetic Fields A 'Credible Threat' To Wildlife**
Joel M. Moskowitz, Ph.D., *Principia Scientific International*, 2018

Impact on Birds and Bees

- "Due to electromagnetic smog, honeybees are often unable to return to their hives (Harst et al., 2006; Favre, 2011; Sharma & Kumar 2010; Sahib, 2011), the resulting massive loss of workers then leads to a colony collapse (e.g. Harst et al. 2006; Sharma and Kumar 2010), which is why electromagnetic radiation has been suggested as one potential cause of colony collapse disorder (CCD) (e.g. Warnke 2009; Sahib 2011)" *Journal of Insect Conservation* (Lázaro et al, 2016)
- Radiation impacts on wild birds documented nest abandonment, plumage deterioration and death. Lab studies of chick embryos documented heart attacks and death. (Al Manville PhD USFWS, 2016)
- EMFs evoke aversive behavior, developmental anomalies and mortality in studied animal groups. (Ministry of Environment & Forests Report 2011 P6)

Take Action!

1. Contact your local, state and US. representatives and tell them to stop 5G.
2. Reduce wireless use, see safety tips [here](#).
3. Find letter templates, view and download fliers to hand out, post and learn more.



EMF
Safety Network
www.emfsafetynetwork.org

San Joaquin County Parents believe radiation from a 5G cell tower is causing cancer in school children. Doctors have diagnosed at least four kids from the county's elementary school system. Parents believe that one specific cell tower poses the biggest health concern.

"We had a doctor tell us that it's 100 percent environmental, the kind of tumor that he has," said Monica Ferrulli told CBS Sacramento.

Ferrulli's son, Mason, is one of the children diagnosed with cancer. The 5G cell tower is located on a path Mason walked on a daily basis prior to his diagnosis. Mason recently relapsed and is currently undergoing brain cancer treatments.

Joe Prime's son, Kyle, was diagnosed with kidney cancer in 2016.

"It just seems like coincidence is no longer a reason for all this illness," Prime told the network.

"Kids shouldn't be guinea pigs and we shouldn't be taking chances with the children's lives," he went on.

The district claims the towers are safe, however, some experts disagree. Concerns over 5G and cancer health risks are not new.

"I wouldn't send my kids there at all, it absolutely is dangerous," said Eric Windheim, an electromagnetic radiation specialist. "Children are still developing and their cells are still being divided. It's the worst possible time in their life to be exposed."

Windheim says that the tower transmits dangerous wireless frequencies. Those wireless frequencies travel upwards of 30 miles.

Parents are pushing to have the cell tower removed, but the district is defiant. The parents claim the district receives \$2,000 for allowing the tower.

The district sent letters to parents stating that the electric magnetic frequencies are "below federal standards."

GATESHEAD VILLAGE WINS – GETS 5G TAKEN DOWN

Mark Steele, a 5G campaigner, has been highlighting the dangers of a secret 5G rollout by Gateshead Council where residents are complaining of increased illness and Cancer in the affected area. There's enough evidence to conclude the new smart 5G arrays on the top of new LED lampposts emit Class 1 Radiation frequencies and should be treated as a danger to the Public. Gateshead Council ignorantly rebutted clear evidence and created false allegations on social media posts and printed leaflets stating that Mark Steele is spreading Pseudo Science and that the arrays are not dangerous or 5G:

They misused Police Powers to gag Mark Steele and yesterday he left a free man and Gateshead Council to fork out £11k of taxpayers money to cover the court cost amounting to woeful ignorance. In Court, none of the Council Officers could explain what 5G is; and their leading Government expert refused to attend the Court hearing. In conclusion, the Judge refused to gag Mark, stating:

“The public have a right to know.”

The Judge declared Mark Steele as a credible expert and engineer on EMF and GSM technologies, which proves Gateshead Council are liable for corruption, misleading the public, making people ill and attempting to discredit Mark Steele and all others such as Smombie Gate fighting 5G rollouts.

Smart City companies are going into Councils with amazing futuristic presentations detailing the first step, which is to install the 5G infrastructure, i.e. the lampposts on streets and motorways.

The benefits will be 24/7 Police surveillance that sees through walls; smart road signs; 4k live streaming on the move; driverless vehicles and public transport; mobile virtual reality; mobile augmented reality; and a fast connection for Elon Musk's new brain implant called the Neuralink giving people the Internet inside their mind. All these features are all a wet dream for Councils who will be the first ones to become Smart Counties because they will be able to increase taxes and the local economy in theory will thrive.

In reality, scientific evidence is mounting across the planet that EMF, RF, 3G, 4G, 5G, WiFi and WiGIG is causing Cancer, killing bees, driving out wildlife and lowering peoples quality of life. All because big business says it's good for the people, and they're continuing to mislead us all of the dangers of continuous use in close proximity and on the skin, let alone what 5G really is, which is an effective battlefield weapon.”

Scientists warn of potential serious health effects of 5G

September 13, 2017



We the undersigned, more than 180 scientists and doctors from 35 countries, recommend a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry. 5G will substantially increase exposure to radiofrequency electromagnetic fields (RF-EMF) on top of the 2G, 3G, 4G, Wi-Fi, etc. for telecommunications already in place. RF-EMF has been proven to be harmful for humans and the environment.

(Note: [Blue links](#) below are references.)

5G leads to massive increase of mandatory exposure to wireless radiation

5G technology is effective only over short distance. It is poorly transmitted through solid material. Many new antennas will be required and full-scale implementation will result in antennas every 10 to 12 houses in urban areas, **thus massively increasing mandatory exposure.**

With "[the ever more extensive use of wireless technologies](#)," nobody can avoid to be exposed. Because on top of the increased number of 5G-transmitters (even within housing, shops and in hospitals) according to estimates, "[10 to 20 billion connections](#)" (to refrigerators, washing machines, surveillance cameras, self-driving cars and buses, etc.) will be parts of the Internet of Things. All these together can cause a substantial increase in the total, long term RF-EMF exposure to all EU citizens.

Harmful effects of RF-EMF exposure are already proven

[More than 230 scientists from 41 countries](#) have expressed their "serious concerns" regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices already before the additional 5G roll-out. They refer to the fact that "numerous recent scientific publications have shown that *EMF affects living organisms at levels well below most international and national guidelines*". Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both [plants](#) and [animals](#).

After the scientists' appeal was written in 2015 additional research has convincingly confirmed serious health risks from RF-EMF fields from wireless technology. The world's largest study (25 million US dollar) [National Toxicology Program \(NTP\)](#), shows statistically significant increase in the incidence of *brain and heart cancer* in animals exposed to EMF below the ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines followed by most countries. These results support results in human epidemiological studies on RF radiation and brain tumour risk. [A large number of peer-reviewed scientific reports](#) demonstrate harm to human health from EMFs.

The International Agency for Research on Cancer (IARC), the cancer agency of the World Health Organization (WHO), in 2011 concluded that EMFs of frequencies 30 KHz – 300 GHz are possibly [carcinogenic to humans \(Group 2B\)](#). However, new studies like the NTP study mentioned above and several epidemiological investigations including the latest studies on mobile phone use and brain cancer risks [confirm that RF-EMF radiation is carcinogenic to humans](#).

The [EUROPA EM-EMF Guideline 2016](#) states that "there is strong evidence that *long-term exposure to certain EMFs is a risk factor for diseases* such as certain cancers, Alzheimer's disease, and male infertility...Common EHS (electromagnetic hypersensitivity) symptoms include headaches, concentration difficulties, sleep problems, depression, lack of energy, fatigue, and flu-like symptoms."

We urge the EU:

- 1) To take all reasonable measures to halt the 5G RF-EMF expansion until independent scientists can assure that 5G and the total radiation levels caused by RF-EMF (5G together with 2G, 3G, 4G, and WiFi) will not be harmful for EU-citizens, especially infants, children and pregnant women, as well as the environment.
- 2) To recommend that all EU countries, especially their radiation safety agencies, follow Resolution 1815 and inform citizens, including, teachers and physicians, about health risks from RF-EMF radiation, how and why to avoid wireless communication, particularly in/near e.g., daycare centers, schools, homes, workplaces, hospitals and elderly care.
- 3) To appoint immediately, without industry influence, an EU task force of independent, truly impartial EMF-and-health scientists with no conflicts of interest¹ to re-evaluate the health risks and:
 - a) To decide about new, safe "maximum total exposure standards" for all wireless communication within EU.
 - b) To study the total and cumulative exposure affecting EU-citizens.
 - c) To create rules that will be prescribed/enforced within the EU about how to avoid exposure exceeding new EU "maximum total exposure standards" concerning all kinds of EMFs in order to protect citizens, especially infants, children and pregnant women.
- 4) To prevent the wireless/telecom industry through its lobbying organizations from persuading EU-officials to make decisions about further propagation of RF radiation including 5G in Europe.
- 5) To favor and implement wired digital telecommunication instead of wireless.

We expect an answer from you no later than **October 31, 2017** to the two first mentioned signatories about what measures you will take to protect the EU-inhabitants against RF-EMF and especially 5G radiation. This appeal and your response will be publicly available.

Respectfully submitted,

Rainer Nyberg, EdD, Professor Emeritus (Åbo Akademi), Vasa, Finland (NRNyberg@abo.fi)

Lennart Hardell, MD, PhD, Professor (assoc) Department of Oncology, Faculty of Medicine and Health, University Hospital, Örebro, Sweden (lennart.hardell@regionorebrolan.se)

WE will add signatories to the following list through the end of 2017. The updated list of signatories and the appeal can be found later [HERE](#).



¹ Avoid similar mistakes as when the Commission (2008/721/EC) appointed industry supportive members for SCENIHR, who submitted to EU a misleading SCENIHR report on health risks, giving telecom industry a clean bill to irradiate EU-citizens. The report is now quoted by radiation safety agencies in EU.

Florian M. König, Dr.Sc. Man. Dir. & Science Header of the Company/Institute "Florian König Enterprises GmbH"

Andrea Leute, Dr. med., Ärzteinitiative Mobilfunk Allgäu-Bodensee-Oberschwaben, Überlingen

Martin Lion, Dr. med., Allgemeinmedizin - Homöopathie, Ulm

Peter Ludwig, Dr. phil., Kompetenzinitiative zum Schutz von Mensch, Umwelt und Demokratie e.V., Saarbrücken

Willi Mast, Dr., Arzt für Allgemeinmedizin und Innere Medizin, Gelsenkirchen

Joachim Mutter, Dr. med., Paracelsus Clinic / Switzerland, Kompetenzinitiative zum Schutz von Mensch, Umwelt und Demokratie e.V., Murg

Gertraud Teuchert-Noodt, Dr.med., Professor of Neurobiology, University of Bielefeld

Peter Ohnsorge, Dr. med., European Academy for Environmental Medicine

Karl Richter, Dr. phil., Professor, Kompetenzinitiative zum Schutz von Mensch, Umwelt und Demokratie e.V., St. Ingbert

Claus Scheingraber, Dr. med. dent., German Working Group Electro-Biology, Brunnthal

Cornelia Waldmann-Selsam, Dr.med., Competence Initiative for the Protection of Humanity, Environment and Democracy e.V., Bamberg

Werner Thiede, Dr. theol., Professor, Pfarrer der Evangelisch-Lutherischen Landeskirche in Bayern und Publizist, Neuhausen

Helmut Wagner, Dr. med., Ophthalmologist, Stuttgart

Harald Walach, Professor, PhD in psychology, PhD in theory and history of science, Change Health Science Institute, Berlin; affiliation: Witten-Herdecke University, Poznan Medical University, Poland

Ulrich Warnke, Dr.rer.nat., Academic Superior Council (retired) University of Saarland

Isabel Wilke, Diplom-Biologin, Editor ElektrosmogReport, Kassel/Berlin

Roland Wolff, Dipl.-Phys., Medical Physicist, Bremen

Ortwin Zais, PhD (Dr. med.), European Academy for Environmental Medicine

GREECE

Christos Georgiou, PhD, Member, Scientific Secretariat of ICEMS; Professor of Biochemistry, Biology Department, University of Patras, Patras

Theodore P. Metsis, PhD, Electrical, Mechanical, Environmental Engineer, Consultant, Athens

ITALY

*Domenico Agrusta, Medicina e chirurgia spec. in Odontostomatologia, Libero professionista
Iscritto ISDE, Taranto*

*Fernanda Amicarelli, Full Professor in Applied Biology, Department of Life, Health and
Environmental Sciences, University of L'Aquila, L'Aquila*

Fiorella Belpoggi, Dr., Director, Research Department, Ramazzini Institute, Bologna

*Sergio Bernasconi, Full Professor of Pediatrics, former Director, Pediatric Department, Editor
emeritus: Italian Journal of Pediatrics, University of Parma*

*Dr Franco Berrino, MD, PhD, former Director, Department of Preventive and Predictive Medicine,
Istitutonazionale dei Tumori, Milan*

Ernesto Burgio, MD, Pediatrician, ECERI – European Cancer and Environment Research Institute (Bruxelles)

Dr Franco Cherubini, Degree in medicine and surgery, Vetralla

*Dott. Agostino Di Ciaula, President of Scientific Committee, Italian Society of Doctors for the
Environment - ISDE Italy, Arezzo*

Dott. Andrea Cormano, MD, Italian Society of Doctors for the Environment - ISDE, Benevento

*Ugo Corrieri, Medicina e chirurgia spec. in Psichiatria, Docente della Scuola Romana di Psicoterapia
Familiare, Roma; Presidente di ISDE-Medici per l'Ambiente della
Provincia di Grosseto; Coordinatore di ISDE-Medici per l'Ambiente per il Centro Italia*

*Dr Patrizia Difonte, Physician, Surgeon, General practitioner and occupational medicine,
Associazione Italiana Elettrosensibili, Lonate Pozzolo, Varese*

Anna Maria Falasconi, MD, Primary Care Pediatrician, National Health System, Rome

Dott. Filippo Maria di Fava, Laurea in Medicina e Chirurgia, Libero professionista, Rome

SPAIN

Alfonso Balmori, BSc, Master in Environmental Education, Biologist. Junta de Castilla y León, Valladolid

José Luis Bardasano, PhD, Biologist and Physician, Prof. of Medical Bioelectromagnetism, Department of Medicine and Medical Specialties, School of Medicine, University of Alcalá. Alcalá de Henares, Madrid

Pilar Muñoz-Calero, MD, President, Fundación Alborada; Co-director, Chair of Pathology and Environment, Faculty of Medicine, Universidad Complutense de Madrid (UCM), Madrid

Miguel Lopez-Lazaro, PhD, Associate Professor, Department of Pharmacology, Faculty of Pharmacy, University of Seville

María Elena López Martín, MD, PhD, Associate Professor of Human Anatomy, School of Medicine, University of Santiago de Compostela (USC)

Enrique A. Navarro, PhD, Professor, University of Valencia, Valencia

Claudio Gómez-Perretta, MD, PhD, Chief of Section, Hospital Universitario La Fe, Valencia

SWEDEN

Mikko Ahonen, PhD, researcher, Sundsvall

Michael Carlberg, MSc, Department of Oncology, Faculty of Medicine and Health, University Hospital, Örebro

Mikael Eriksson, MD, PhD, Associate Professor, Department of Oncology, Skane University Hospital, Lund

Lena Hedendahl, MD, Independent Environment and Health Research, Luleå

Olle Johansson, Associate Professor, Experimental Dermatology Unit, Department of Neuroscience, Karolinska Institute, Stockholm

Gunilla Ladberg, PhD, Member of the Board of the Swedish association Vågbrytaren, Lidingö

Leif G. Salford, MD, PhD, Senior Professor of Neurosurgery, Director of the Rausing Laboratory for Translational NeuroOncology, Lund University, Lund

Elsy-Britt Schildt, MD, PhD, Senior Consultant, Department of Oncology and Radiation, County Hospital, Kalmar

Fredrik Söderqvist, PhD, Center for Clinical Research, Uppsala University, Västerås

SWITZERLAND

Daniel Favre, Dr. phil. nat., Biologist, Independent Researcher, Brent

Peter Meier, Dr.Med., Facharzt für Innere Medizin FMH, M.Sc. Präventivmedizin, Mitglied der European Academy for Environmental Medicine, Sissach

UK

Erica Mallery-Blythe, MD, Founder of PHIRE (Physicians' Health Initiative for Radiation and Environment) Trustee Radiation Research Trust (RRT), Soton

David Gee, Visiting Fellow, Institute of Environment, Health and Societies, Brunel University, London

Andrew Goldsworthy, BSc, PhD, Lecturer in Biology (retired), Imperial College London, Monmouth

Alasdair Philips, BSc, DAgE, Professional engineer, Powerwatch

Syed Ghulam Sarwar Shah, MBBS, MA, MSc, PhD, Post-Doctoral Research Fellow, Department of Occupational Health, Guy's and St. Thomas' NHS Trust; Honorary Research Fellow, Department of Clinical Sciences, Brunel University, London

Sarah Starkey, PhD, Independent Neuroscience and Environmental Health Research

Sareesh Naduvil Narayanan, PhD, Assistant Professor, Department of Physiology, RAK College of Medical Sciences, RAK Medical & Health Sciences University, Ras Al Khaimah, UAE

R. S. Sharma, PhD, Head, Scientist - G & Sr. DDG, Div. of Reproductive Biology, Maternal & Child Health and Chief Project Coordinator - EMF Health Project India, Indian Council of Medical Research, Ansari Nagar, New Delhi

IRAN

Hamid Mobasheri, PhD, Head of Biomaterials Research Center, Head of Laboratory of Membrane Biophysics and Macromolecules, Institute of Biochemistry and Biophysics, University of Tehran
Amirnader Emami Razavi, PhD, Executive Manager and Principal Investigator of Iran, National Tumor Bank, Cancer Institute of Iran, Tehran University of Medical Sciences
Dr. Masood Sepehrimanesh, PhD, Assistant Professor, Gastrointestinal and Liver Disease Research Center, Guilan University of Medical Sciences, Rasht

ISRAEL

Iris Atzmon, MPH, Epidemiology, University of Haifa, EMF author and researcher, Haifa
Michael Peleg, M.Sc., Radio Communications Engineer and Researcher, Technion, Israel Institute of Technology, Haifa
Elihu D Richter, MD, MPH, Professor, Occupational and Environmental Medicine, Hebrew University-Hadassah School of Public Health and Community Medicine, Jerusalem
Yael Stein, MD, Hebrew University - Hadassah Medical Center, Jerusalem
Danny Wolf, MD, Pediatrician, Clialit Health Services Raziell, Netanya Herzelia

JORDAN

Mohammed Saleh Al Salameh, PhD, Professor, Department of Electrical Engineering, University of Science & Technology, Irbid

KOREA (South)

Kiwon Song, PhD, Professor, Department of Biochemistry, Yonsei University, Seoul
Young Hwan Ahn, MD PhD, Professor, Department of Neurosurgery, Ajou University School of Medicine, Suwon

NEW ZEALAND

Mary Redmayne, PhD, Adjunct Research Fellow, Victoria University of Wellington
Damian Wojcik, MD, MBChB, Medical director/ Northland Environmental health Clinic, Whangare, Northland

NIGERIA

Aneyo Idowu Ayisat, M.Sc., Lecturer, Environmental Biology Unit, Biological Science Department, Yaba College of Technology, Yaba, Lagos

OMAN

Dr Najam Siddiqi, MBBS, PhD, Associate Professor of Anatomy, Oman Medical College, Sohar

RUSSIAN FEDERATION

Yury Grigoriev, Professor, M. Dr Sci., Federal. Medical Biophysical Center, Moscow
Maxim V. Trushin, PhD, Associate Professor, Kazan Federal University, Kazan

TURKEY

Osman Cerezci, Professor Dr., Dept. Electrical-Electronics Engineering, Sakarya University, Adapazarı
Suleyman Dasdag, PhD, Prof. Dr., Biophysics Department, Medical School, Istanbul Medeniyet University, Uskudar, Istanbul

Introduction to the United Nations EMF Appeal Delivered by Martin Blank, PhD, Department of Physiology and Cellular Biophysics, Columbia University.

I'm here with disturbing news about our favorite gadgets: cell phones, tablets, wi-fi, etc. Putting it bluntly, they are damaging the living cells in our bodies and killing many of us prematurely.

I'm Dr. Martin Blank, from the Department of Physiology and Cellular Biophysics at Columbia University. It is distressing for me, and more than 160 colleagues, who today are petitioning the United Nations requesting that they address this problem. We are scientists and engineers, and I am here to tell you – we have created something that is harming us, and it is getting out of control! Before Edison's lightbulb, there was very little electromagnetic radiation in our environment. The levels today are very many times higher than natural background levels and are growing rapidly because of all the new devices that emit this radiation. An example that a lot of us have in our pockets right now is the cell phone. One study shows that as cell phone usage has spread widely, the incidence of fatal brain cancer in younger people has more than tripled. We are putting cellular antennas on residential buildings, and on top of hospitals, where people are trying to get well. Wireless utility meters, and cell towers, are blanketing our neighborhoods with radiation. It's particularly frightening that radiation from our telecommunication and powerline technology is damaging the DNA in our cells. It is clear to many biologists that this can account for the rising cancer rates. Future generations – OUR CHILDREN – ARE AT RISK. These biologists and scientists are not being heard on the committees that set safety standards. The BIOLOGICAL facts are being ignored, and as a result, the safety limits are much too high. THEY ARE NOT PROTECTIVE! More protection will probably result from full disclosure of possible conflicts of interest between regulators and industry. Rising exposure to electromagnetic radiation is a GLOBAL problem. The World Health Organization and international standard setting bodies are not acting to protect the public's health and well-being. International exposure guidelines for electromagnetic fields must be strengthened to reflect the reality of their impact on our bodies, and in particular, on our DNA. Although we are still in the midst of a great technological transformation, the time to deal with the harmful biological and health effects is long overdue. We are really all part of a large biological experiment, without our informed consent. To protect our children, ourselves, and our ecosystem, we must reduce exposure by establishing more protective guidelines. And so, today, scientists from around the world are submitting an Appeal to the United Nations, its member states and the World Health Organization, to provide leadership in dealing with this emerging public health crisis. Details of The Appeal can be found at EMFScientist.org

NOTES FROM POWER WATCH DOCUMENTARY:

Professor Henry Lai, University of Washington, 30 years of research:

Two to three thousand studies confirm damage EMR does to body.

Governments setting EMR exposure levels on thermal effects is irresponsible, because large portions of science are thereby ignored.

Dr. Gerd Oberfeld, Public Health Dept. Salzburg, Austria:

Wants WiFi out of schools because of:
DNA damage
Cancer
Increased flu-like symptoms

Dr. Olle Johansson, Karolinska Institute:

He did research on EMR at lower levels than WiFi and found biological effects:

- Chromosome damage
- Impact on concentration capacity
- Decrease in short term memory
- Increase in cancer

Those who can't feel it – will they get cancer and other damage down the road?

The hypersensitive are a kind of walking antennas. If some people can feel WiFi, it should throw the standard limits out the window, and put a question mark on the WiFi revolution.

Countries are wrong to set limits on thermal effects, because that's just rubbish. There's great damage done at much lower rates.

Dr. Ian Gibson, MP, Norwich, North Carolina:

Government is not taking research on WiFi seriously. Industry rules in this area. 5-10 years from now, who knows what long-term exposures are going to show?

Switzerland, Italy, Russia, China: all have exposure levels thousands of times below ours.

Dr. Sarah Myhill, Researcher in England

- . 5G is a silent war against the human population. This is weaponized technology developed by the military.
- . Inflammation causes any pathology you care to name. WiFi causes inflammation. Inflammation interferes with the deliverance of energy to all cells. The body spends 1/3 of its energy on staying alive. We can't overspend. Or, if energy is interfered with, the results are fatigue and muscle pain, depression, anxiety.
- . EMF is a big problem for very few right now, but it's growing. Alzheimer's and dementia are now the top causes of death. Autism now affects 1 in 4. WiFi, which has been linked as a causal factor to all of these, will poison more and more people.
- . **Current WiFi is powered at 2.4 GHz broadcast frequency.** This level is when water molecules start to vibrate. They rotate, which permits calcium leakage and other damage to occur.
- . EMF (WiFi) frequencies have been used to cause:
 - . Passing out
 - . Heart arrhythmia
 - . Neurological problems
 - . Tingling
 - . Malaise
 - . Fatigue
 - . Paralysis

But 5G will use 60 GHz. This will affect oxygen molecule absorption. The molecules won't be able to bind to hemoglobin, which they need to be absorbed. This will cause people to have oxygen deprivation symptoms.

- . **5G will also affect the body's ability to produce Vitamin D.**

5G is going to cause all kinds of health issues.

Dr. Barrie Trower

EMF Researcher

Former British Intelligence Officer in charge of interviewing captured spies to find out what EMF weapons their countries were developing.

- . **40 countries' top scientists have warned about 5G.**
 - . It will interfere with body processes.
 - . It will be very close to an EMR weapon called Active Denial used for crowd control to create:

- . This is the same frequency used for crowd control: it can cause people to
 - . hear voices
 - . lose use of extremities
 - . induce strange illness
 - . pass out
- . England has banned WiFi from all classrooms for children under 18 years of age.
- . EMR opens the blood/brain barrier and lets in heavy metals. This causes many problems, including gluten intolerance.

Interview with Dr. Tom O'Bryan, speaker and workshop leader:
(Part of Alzheimer's and Dementia Summit series)

- . "When you wear out microglia (immune cells in your brain) with constant gluten or WiFi, the microglia get worn out. The gut elevates antibodies that cause damage. These can get checked by a doctor. Autoimmunity biomarkers can be measured.

Olle Johansson, Professor in Stockholm, Sweden
Expert on Electromagnetic Fields (EMF)
(Part of Alzheimer's and Dementia Summit series)

- . Many EMF studies are being published every day. The last ten years of study have revealed:
 - . Loss of concentration
 - . Short term memory problems
 - . Cell function in decline
 - . Leakage of blood/brain barrier, which lets in heavy metals
 - . Cell death
 - . Behavior and sleep problems

. Mortality has increased. And Alzheimer's and dementia rates correlate to increases in Internet and cell towers.

"It's predicted in Swedish newspapers that more and younger people will get and die from Alzheimer's because of WiFi, along with other factors. But a high exposure to WiFi is a very big factor.

- . **Advice from the Wireless Safety Board in Sweden:**
 - . Keep your 'smart' phone away from your body
 - . Use it only as an emergency device. Otherwise, leave it off.
 - . Keep any conversations short.
 - . Use landline phones instead.

- . In a research study, boys exposed to WiFi did less well in learning tasks.
- . The WHO has put WiFi in the cancer classification, as causing brain tumors and childhood leukemia. They are clearly saying WiFi isn't safe.
- . "The wireless companies don't take responsibility for any kind of health effects. At a conference in London, a group of wireless and insurance companies said the question is not IF there is an effect on the brain, but only WHO WILL PAY FOR DAMAGE, because is won't be them."

EMFs and WiFi gadgets and toys:

- . They're not necessary
- . Green technologies are coming
- . Use human-friendly devices

From Dr. Joseph Mercola

Disinformation by Industry Threatens Public Health

Unfortunately, negative health effects from EMFs are usually not immediately noticeable, as the damage accrues over time, similar to that from smoking. It's important to note that researchers are in general agreement that there's a latency period of about 10 years or more before the damage shows up, which places children at greatest risk, since their exposures are earlier in life and longer.

There's no doubt in my mind that cellphones are one of the greatest public health threats of the 21st century. But, like the tobacco industry before it, the telecommunication industry has manipulated federal regulatory agencies, public health authorities and professionals through powerful and sophisticated lobbying efforts, leaving consumers confused about the health risks.

In an investigative report for The Nation, Mark Hertsgaard and Mark Dowie reveals "the disinformation campaign — and massive radiation increase — behind the 5G rollout."

By early 1999, findings from more than 50 studies were already raising "'serious questions' about cellphone safety," and this evidence was shared with the CTIA⁹ (the trade association for the wireless industry) board of directors. They ignored it, and have consistently fought to prevent public discussion and knowledge about the possible effects.

5G Rollout Will Significantly Magnify Health Risks

The industry touts 5G, the "5th Generation" wireless network, as a way to create faster internet and streaming services, and better cellphone coverage. The problem is that 5G relies primarily on the bandwidth of the millimeter wave (MMW), which is known to penetrate 1 to 2 millimeters of human skin tissue⁹ and has been linked to numerous health problems, including:¹⁰

- Eye problems such as lens opacity in rats, which is linked to the production of cataracts

Solution: Minimize exposure to environmental toxins and EMFs —

In terms of air pollution, it's worth remembering that your indoor air is often five times more polluted than outdoor air, and indoors, it's something you can control, using a high-quality air purifier. Pesticides can be avoided by eating certified organic foods.

Non-native EMFs contribute to Alzheimer's by poisoning your mitochondria, and this is not limited to living in close proximity to power lines. It also includes electromagnetic interference from the electric grid and microwave radiation from your cellphone, cellphone towers, Wi-Fi and more.

Radiation from cellphones and other wireless technologies trigger excessive production of peroxynitrites,³³ a highly damaging reactive nitrogen species. Increased peroxynitrites from cellphone exposure will damage your mitochondria,^{34,35} and your brain is the most mitochondrial-dense organ in your body. To learn more about the mechanisms that place your health in jeopardy, and what you can do about it, see "**Top 19 Tips to Reduce Your EMF Exposure.**"



Effects of 5G Radiation on the Human Body

Prof. Rajiv Iyer, Prof. Reeta Shaktivel
Department of EXTC, KCCEMSR, Thane,
Maharashtra, India

Abstract: Fifth generation mobile communication (5G) studies are starting to gain real momentum as we point toward the year 2020. The first 5G networks will be supporting traffic volumes more than 1,000 times higher than today with data rates up to multi-Gbps for specific scenarios. The preliminary frequency bands identified are between 6-100 GHz. This paper intends to study the effects of these frequencies on the human body since most of the 5G devices will be worn on the body. So the biocompatibility of these devices is an important issue. This paper focuses on the recent results and advances related to different aspects of interactions of 6-100 GHz frequency with the human body.

Keywords: UMTS, CPICH, EMF,

I. INTRODUCTION

In just a decade, the amount of IP data handled by wireless networks will have increased by well over a factor of 100: from under 3 Exabytes in 2010 to over 190 Exabytes by 2018, on pace to exceed 500 Exabytes by 2020. This deluge of data has been driven mainly by video thus far, but new unforeseen applications can reasonably be expected to materialize by 2020. In addition to the sheer volume of data, the number of devices and the data rates will continue to grow exponentially. The number of devices could reach the tens or even hundreds of billions by the time 5G comes to fruition, due to many new applications beyond personal communications.

The four consecutive generations of mobile communication systems have been designed for increasing the spectral efficiency as well as peak data rate. In the fifth generation, it is foreseen that other criteria such as latency, energy efficiency or EM radiation exposure will also have an important role in the design of such communication systems. The next generation will also bring some new concepts to mobile communications such as heterogeneous layout or coordinated multipoint (CoMP) communication, which will have an impact (good or bad) on the EM radiation exposure. With the growing usage of mobile communication devices by the public over longer period of times, the concerns about adverse health effects of EM radiation exposure, from mobile communication systems in particular are rapidly increasing, which brings about the need to investigate techniques for reducing EM radiation from such systems. Moreover, very few research works have explicitly focused on reducing the EM emission levels of wireless communication systems. It has been shown that using lower frequency bands in universal mobile telecommunication systems (UMTS) can reduce the EM radiation density of a BS by about 13 dB and the transmit power of the primary common pilot channel (CPICH) by about 16 dB. As there is a direct relationship between transmit power, SAR and EM radiation exposure, some wireless communication techniques that have proven to reduce the SAR and/or transmit power of mobile communication systems, and hence, EM radiation exposure levels.

II. INTERACTION OF 60 GHZ FREQUENCY WITH THE HUMAN BODY

The primary biological targets of 60-GHz radiations are the skin and eyes. Exposure of the eyes leads to the absorption of the EM energy by the cornea characterized by a free water content of 75% and a thickness of 0.5 mm. Ocular lesions have been found after high-intensity exposure of an eye (3 W/cm², 6 min) [1]. However, studies performed at 60 GHz (10 mW/cm², 8 h) demonstrated no detectable physiological modifications [2], indicating that EM waves act on the cornea in a dose-dependent manner. Hereafter, we will essentially consider the interactions with the skin as it covers 95% of the human body surface. From the EM viewpoint, the skin can be considered as an anisotropic multilayer dispersive structure made of three different layers, namely, epidermis, dermis, and subcutaneous fat layer (Fig. 1). The skin also contains capillaries and nerve endings. It is mainly composed of 65.3% of free water, 24.6% of proteins, and 9.4% of lipids [3].

The permittivity data and temperature levels available at 60 GHz are summarized in table 1 from room and body temperatures.

Reference	ϵ	T(Celsius)	Method	Sample type
Gabriel[4]	7.98 – j 10.9	37	E	In vivo
Gandhi[5]	8.89 – j 13.15	37	E	In vitro

Martin Pall, Ph.D., professor emeritus at Washington State University, is another one of the scientists who signed the petition. [He discovered more than two dozen bodies of research](#) asserting that EMFs work by activating voltage-gated calcium channels (VGCCs), which are located in the outer membrane of your cells.

Once activated, they allow a tremendous influx of calcium into the cell — about 1 million calcium ions per second per VGCC. When there's excess calcium in the cell, it increases levels of both nitric oxide (NO) and superoxide. While NO has many beneficial health effects, massively excessive amounts of it react with superoxide, forming peroxynitrite, which is an extremely potent oxidant stressor.

Peroxynitrites, in turn, break down to form reactive free radicals, both reactive nitrogen species and reactive oxygen species, including hydroxyl radicals, carbonate radicals and NO₂ radicals — all three of which do damage. Peroxynitrites also do their own damage.

EMFs are not, therefore, causing damage by having a thermal influence or heating your tissues; they are not "cooking" your cells as some suggest. Rather, [EMF radiation](#) activates the VGCCs in the outer cell membrane, triggering a chain reaction of devastating events that, ultimately:

- Decimates your mitochondrial function, cell membranes and cellular proteins
- Causes severe cellular damage
- Results in DNA breaks
- Dramatically accelerates your aging process
- Puts you at higher risk for chronic disease

Like Moskowitz, Pall believes consequences of chronic EMF exposure to the brain can include neurological changes leading to [anxiety](#), [depression](#), [autism](#) and [Alzheimer's disease](#).¹⁰ Further, it's known that elevated VGCC activity in certain parts of the brain produces a variety of neuropsychiatric effects. According to Pall:

"I reviewed a [large number] of studies on various kinds of EMF exposures, each of them showing neuropsychiatric effects. What you find is that these effects have been repeated many times in these epidemiological studies.

It's the same thing that everybody's complaining about, 'I'm tired all the time,' 'I can't sleep,' 'I can't concentrate,' 'I'm depressed,' 'I'm anxious all the time,' 'My memory doesn't work well anymore.' All the things everybody's complaining about.

We know all those things are caused by EMF exposures. There's no doubt about that. Because we know their effects on the brain, we know that the VGCCs' excessive activity can produce various neuropsychiatric problems."

New paper on risks to children of radiation from digital technologies GR3C, University College Cork, Feb 27, 2019

Professor Tom Butler of University College Cork in Ireland published a new working paper on the risks that mobile digital technologies present to children, titled:

“On the Clear Evidence of the Risks to Children from Smartphone and WiFi Radio Frequency Radiation.”

See the link below. This paper is an in-depth review of independent peer-reviewed research. The findings are thought-provoking and alarming for parents and guardians of children and adolescents.

Butler, T. “On the Clear Evidence of the Risks to Children from Smartphone and WiFi Radio Frequency Radiation.” Working paper. University College Cork, Ireland. undated.

Abstract:

Children’s health and well-being is under significant threat from everyday digital technologies, as the past 15 years have seen the proliferation of microwave Radio Frequency Radiation (RFR) devices in the home, school and society. The safety standards for such devices—smartphones, tablets etc.—were based on the proven thermal or heating effects of microwave devices in adults, not children. Scientists in the life sciences have long been aware of equally harmful non-thermal effects. However, physicists and engineers have operated on the theory that non-ionizing RFR could not directly damage human DNA and lead to cancer, as it was far less powerful than ionizing radiation (x-rays, nuclear etc.). That theory has been solidly and roundly refuted, as this paper illustrates. Cancer risks aside, research studies have demonstrated that low-intensity RFR elicits a range of pathophysiological conditions in experimental animals and humans. This is why parents, educators and governments should be alarmed and take immediate and appropriate action. In an Irish, and indeed international context, there is clear ignorance on such matters. In response, this paper aims to inform by presenting clear evidence, in a balanced manner, of the risks to children based on proven scientific theories and empirical evidence. The paper concludes by offering practical advice on how the risks to children, and indeed adults, can be minimized.

THE FIRST REPORTED INJURY OF 5G COMES FROM SWITZERLAND

The first reported injury of 5G in a news report comes from Switzerland, where 5G has been launched in **102 locations**. The weekly French-language Swiss magazine L'Illustré interviewed people living in Geneva after the 5G rollout with alarming details of illness. In their article, **With 5G, We Feel Like Guinea Pigs**, posted July 18, 2019, they report neighbors met to discuss their many common symptoms and many unanswered questions.

5G: Its Legal but Not Safe

As soon as the antennas were installed, several residents and entire families in the heart of Geneva reported similar unusual symptoms of loud ringing in the ear, intense headaches, unbearable earaches, insomnia, chest pain, fatigue and not feeling well in the house. 29-year-old Geneva resident, Johan Perruchoud, called up Swisscom and was told that indeed the 5G cell towers were activated on the same day he began to feel the symptoms. When others called Swisscom they were told everything is legal and within guidelines.

Swiss Physician Denounces 5G and Calls for a 5G Moratorium

Dr. Bertrand Buchs, who has also called for a 5G moratorium, states he has seen more and more patients with similar symptoms. He notes, "In this case, our authorities are going against common sense ... we risk experiencing a catastrophe in a few years... no serious study exists yet, which is not surprising when we know that this technology was developed in China, then to the United States. In Switzerland, we could open a line for people who feel bad, listen to these complaints and examine them. Our country has the means and the skills. The debate must be launched because the story is not about to end."

Swisscom: Millions of Fast

Many Others Suffer Microwave Illness/Electrosensitivity

It is reported that 3% to 30% of the population have symptoms similar to Microwave illness or electrosensitivity, depending on the country and if mild to severe symptoms are reported.

Dr. Scott Eberle describes how a physician learned about his own electrosensitivity published originally in 2014 in the Sonoma Medicine and later reprinted in the Santa Clara County/Monterey County Medical Association Bulletin. You can read Dr. Scott Eberle's **What's the Diagnosis, Doctor?** He has also written "An Underworld Journey: Learning to Cope with Electromagnetic Hypersensitivity." Dr. Scott Eberle.

Ecopsychology.9(2):106-111, June

2017. https://www.researchgate.net/publication/317923126_An_Underworld_Journey_Learning_to_Cope_with_Electromagnetic_Hypersensitivity

Writer **Alison Main** has documented her experience in developing electrosensitivity and her frustration at being more isolated from other people and wireless technology she would like to use. **Electro-Sensitivity: When the Modern World Hurts**

See Also

- **PST 5G Scientific Literature:** <https://mdsafetech.org/5g-telecommunications-science/>
- **PST Electrosensitivity Stories.** <https://mdsafetech.org/electrosensitivity-stories/>
- **PST Electrosensitivity Science.** <https://mdsafetech.org/science/es-science/>
- **PST Review of Electrosensitivity:**
 - **Part 1 Overview**
 - **Part 2 Relevant Scientific Evidence**
 - **Part 3 A Clinical Approach to EHS**
- **PST Scientific Literature on Cellular and Biological Mechanisms of Wireless Radiofrequency Radiation.** <https://mdsafetech.org/cellular-mechanisms-oxidation/>

diagnosis and treatment of EMF-related health problems and illnesses gives an “overview of the current knowledge regarding EMF-related health risks and provides recommendations for the diagnosis, treatment and accessibility measures of EHS to improve and restore individual health outcomes as well as for the development of strategies for prevention or <https://www.degruyter.com/view/j/reveh.ahead-of-print/reveh-2016-0011/reveh-2016-0011.xml?format=INT> or **EMF Guidelines**

- **‘Are community concerns over the 5G network rollout based on unfounded anxiety or valid evidence?’** Guest Blog from Dr. Don Maisch, Australia. Between a Rock and a Hard place. April 25, 2019. <https://betweenrockandhardplace.wordpress.com/2019/04/25/guest-blog-from-dr-don-maisch-australia-are-community-concerns-over-the-5g-network-rollout-based-on-unfounded-anxiety-or-valid-evidence/>
- **The Prevalence of People With Restricted Access to Work in Man-Made Electromagnetic Environments.** Bevington M. Journal of Environment and Health Science. January 18, 2019. <https://www.ommegaonline.org/article-details/The-Prevalence-of-People-With-Restricted-Access-to-Work-in-Man-Made-Electromagnetic-Environments/2402>
- **Prevalence of self-reported hypersensitivity to electric or magnetic fields in a population-based questionnaire survey.** Hillert L et al. Scand J Work Environ Health. 2002 Feb;28(1):33-41. <https://www.ncbi.nlm.nih.gov/pubmed/11871850>
- **Changes of Clinically Important Neurotransmitters Under the Influence of Modulated RF Fields- A Long-term Study Under Real-life Conditions.** (2011) Buchner K and Eger H. <https://ecfsapi.fcc.gov/file/7521095891.pdf>
- **Research articles by Dr. Horst Eger.** https://www.researchgate.net/scientific-contributions/2014064959_Horst_Eger

SHARE THIS:

TwitterFacebook

LIKE THIS:

Like

SONOMA CLEAN POWER REPORT

Lead Locally (CEC Grant)

The Lead Locally Research Team is monitoring the baseline usage for all Phase 1 pilot homes. Phase 1 is a study of emerging technologies for home use. The products are not yet market ready and this study will create the documentation necessary to determine if the items are viable for our climate zone. SCP has begun recruitment for 50 additional sites for the Phase 2 Technology Demonstration study on market ready technologies such as; daylighting retrofits and phase change materials for commercial properties, night ventilation, induction cooktops, and economizers for residential homes. The Phase 2 study will help determine the best strategies for deployment of the technologies at our Advanced Energy Center.

An open recruitment and application for manufacturers and distributors to display and deploy emerging technologies at the Advanced Energy Center is publicly available until the opening of the Center. This application can be found via the SCP website.

EVERGREEN outreach to SCP member jurisdictions

Prior to June 19, the City of Sonoma had been the only local government that had registered all of its municipal accounts for EverGreen service. In the last month on June 6, the Town of Windsor contacted SCP staff and requested certain key municipal accounts be upgraded to EverGreen. On June 25, the City Council of Cotati voted unanimously to convert all of their accounts to EverGreen. On July 16, the City of Sebastopol voted to convert all of their accounts to Evergreen and the County of Sonoma recently included funds to go toward EverGreen premiums in its adopted budget for a large portion of their accounts. The City of Santa Rosa held a Climate Subcommittee meeting to formally discuss transitioning their municipal accounts over to EverGreen service.

approve adoption of customer electric generation rates starting September 1, 2019 with 2.0% savings for all rate classes.

By increasing customer rate savings to 2.0%, the roughly \$10 million in reduced expenses would be shared approximately equally between additional rate savings and additional reserves. In addition, it is likely that SCP can sustain a 1% savings through 2020, and perhaps a slightly higher level of savings, supporting SCP's goal of rate stability. Staff recommends rates that provide 2.0% savings on total electric charges relative to the distribution utility's adopted July 1, 2019 rates.

All dollar amounts are in \$ millions

Total Bill Savings	Customer Savings on Total Bill	Customer Programs	Capital Investments	Change in Program Reserves	Change in Operating Reserves	Change in Collateral Reserves
1.0%	\$3.0	\$12.4	\$8.7	\$3.3	\$16.6	\$2.2
2.0%	\$10.0	\$12.4	\$8.7	\$2.6	\$12.9	\$1.7

“E-TOU-C” rate at the end of the pilot. PG&E and Calpine worked together on bill messaging, bill protection credits, and other operational items that resulted in a smooth customer experience. SCP’s pilot results show that of the 6,968 SCP customers that took service on E-TOU-C during the pilot, 5,382 saved money on the rate. In total, those customers saved \$85,684, meanwhile SCP paid \$12,888 in bill protection. SCP saw no change in opt-out rates due to the Pilot.

Discussion:

Full Default TOU Transition Next Steps:

In April, Staff explained to the Board that the Commission and PG&E have asked the CCAs to make two decisions by October 2019:

1) Will the CCA transition its residential E-1 customers to the new Time-of- Use (Peak Pricing 4-9 p.m. Every Day)?

2) Will the CCA offer bill protection to its customers, in a manner similar to PG&E?

LEGISLATIVE REPORT

Wildlife

There has been a lot of recent activity in Sacramento pertaining to energy. On July 5, Assembly Member Holden introduced broad wildfire liability legislation (AB 1054) and it swiftly made its way through the process to get signed into law just seven days later. The bill is a giant, complex grand bargain to create a \$21 billion insurance fund, financed primarily by ratepayers, but with significant upfront shareholder contributions. The fund is designed to quickly assist wildfire victims, and forms a number of new public agencies to oversee pooled catastrophe insurance, wildfire electric utility safety certification, criteria and judgments on wildfire cost recovery from ratepayers and related topics. The bill significantly increases the CPUC’s powers to determine where to allow ratepayer funds to pay for utility wildfire damage and even to oversee municipal power agencies disaster plans for the first time. Some of the more complex issues to evaluate in the law include dozens of rule changes at the CPUC that allow faster decision making, increased use of closed-door decision making meetings, limiting the actions the CPUC can take on the basis of public comment and expanding the use of intervenor compensation for groups like TURN. Taxpayers are also potentially impacted as well because the initial insurance fund will be funded from the State’s general fund as a loan.

In less than a week, the Legislature heard and passed AB 110 (Ting), AB 111 (Committee on Budget), and AB 1054 (Holden) out of both houses and sent them to the Governor for his signature. Governor Newsom signed all three bills on July 12th.

AB 110 (Ting) -- Amends the 2019 Budget to provide resources associated with wildfires, reflected in SB 111. These resources are associated with the Department of Finance’s role in the implementation of the wildfire policy bill, AB 1054.

on their website. Assemblyman O'Donnell accepted the amendment. When the Legislature returns on August 12th, AB 1362 will be amended with the following language:

Section 365.3. (a) The commission shall post, in a consolidated location on its internet website, each load-serving entities' residential electric rate tariffs and programs to enable customers and local governments to compare rates, services, environmental attributes, and other offerings. The documents posted shall include, but not be limited to, joint comparison rates for each of the community choice aggregators and investor-owned utilities and the disclosures required of retail sellers pursuant to Sections 398.4 and 398.5. This information shall also be available and easily accessible on the load-serving entities internet websites.

AB 1424 (Berman) – Electric Vehicle Charging Stations

Board Action: Support

Location: Senate Appropriations Committee

AB 1424 will assist California with meeting its electric vehicle (EV) charging station deployment goals by ensuring EV charging station payment methods are technology neutral. The Air Resources Board (ARB) adopted regulations in June to mandate all publicly available charging stations to be outfitted with Euro Mastercard Visa (EMV) credit card readers. Unfortunately, the regulations are not technology neutral and do not allow for other viable and more secure credit card reader technologies that currently exist and are becoming increasingly prominent. AB 1424 will create a technology neutral payment standard without sacrificing consumer access to stations.

SB 155 (Bradford) – Integrated Resource Plan

Prior Board Action: Oppose as amended May 1, 2019

Staff Recommendation: Neutral with Amendment

Hearing: Assembly Appropriations Committee

SB 155 was heard on July 8th in the Assembly Natural Resources Committee where it was amended to resolve CCA concerns that the CPUC would act on the authority granted by SB 155 to order CCAs to procure specific resources. Thus, taking procurement decisions out of the hands of the CCA board of directors. The committee understood the CCAs concerns that the IRP is a planning document and not a procurement compliance plan. When the Legislature returns on August 12th, SB 155 will be amended with the following language:

Section 454.54 (a) In addition to the requirements of Section 454.52, the commission shall enforce the requirement, that the integrated resource plan of each load-serving entity shall contribute to a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy resources in a cost-effective manner, meets the

SB 520 (Hertzberg) – Provider of Last Resort

Board Action: Allow to Negotiate

Hearing: Assembly Appropriations Committee

SB 520 authorizes the CPUC to develop threshold attributes for load serving entities to serve as a “provider of last resort” or POLR. The amendments taken on June 27 were technical in nature and did not improve the provisions that would enable the CCAs to become the provider of last resort.