



The TERRA Act of 2021

Tracking, Enforcing and Reducing Radiation in Air Act *Reducing Background Radio Frequency Radiation (RFR) from Wireless Telecommunication Facilities (WTF) and Digital Devices*

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Right now there is an [unprecedented amount of Congressional money](#) allotted to the rapid expansion of wireless infrastructure across the United States without any financial or due process considerations for public safety, national security, environmental and health impacts, informed consent, consumer protections, or breach of data privacy rights.

The proposed TERRA Act is a legislative request for a new federal regulatory process to reduce the climate change impact from wireless telecommunication facilities, digital devices, and other communication technologies by tracking, enforcing and reducing non-ionizing radiation emission levels to accelerate net carbon zero 2030 objectives. The performance metrics gathered will be necessary to improve public safety by measuring power levels and RFR and to improve the air quality in the environment. The deep impact of RFR and CO2 greenhouse gas (GHG) emissions from rapid 5G next generation (5G+) expansion will be evaluated, especially in [smart cities or regions](#) where there will be [more towers required](#) to deliver the signal. 5G+'s highly inefficient power consumption usage both contradicts and jeopardizes President Biden's 2030 Public Policy on ["empowering the US to build more resilient infrastructure \[and\] have access to clean air."](#)

The CT industry could be on track to use as much as [51% of all worldwide electricity](#) produced and contribute up to 23% of the globally released GHG by 2030. In addition, 5G+ base stations and WTFs can use up to [three and a half times more power than existing 4G base stations](#). This means the probability of the FCC's cumulative Maximum Permissible Exposure Limit (MPEL) and power limits being exceeded is very high and puts the [general population, our environment, and life here in the US at higher risk](#) of immediate thermal heating of tissue.

The TERRA Act of 2021 is a major opportunity for our elected officials to step up and safeguard humanity and our environment at a pivotal time by regulating power levels, RFR, and CO2 greenhouse gas (GHG) emissions. Ultimately, the Communications Technology (CT) Industry should be held accountable for their direct and significant contribution to climate change [just like other big carbon polluters](#) and their lack of an evidenced-based MPEL that minimizes the [bioeffects from non-ionizing RFR](#) below the safety threshold.

One of the purposes for the FCC's existence is to "promote the safety of life and property" per [47 USC 151](#). However, an August 13th decision from the D.C. Court of Appeals on the [Environmental Health Trust/Children's Health Defense v. FCC case on wireless safety standards](#) ruled that the FCC's RFR guidelines are not evidence-based, which means we are currently unprotected from wireless harm. While the FCC is revisiting their obsolete guidelines, 5G+ power levels are [already exceeding threshold limits](#) in certain jurisdictions and we still don't have a federally mandated MPEL tracking and enforcement process. How are we to understand the magnitude of the problem we are facing and prepare for new guidelines to be enforced?

It is time to require implementation of RFR mitigation measures to reduce background radiation levels such as using fiber optic wired broadband wherever possible and installing fuses in cell towers to control power levels. The United States Congress has approved an historic [\\$65 billion dollars](#) for 5G+ broadband expansion and further deregulation of the CT industry. **This guarantees a substantial increase in telecoms' industrial profits without any money going towards public safety for MPEL enforcement, RFR mitigation measures or [2030 Carbon Reduction goals](#).**

By supporting the TERRA Act legislators have the opportunity to positively impact the future of our children, the environment, and our country through enforcing the new MPEL and improving national security, public safety, wireless health concerns such as ADA, consumer protections and GHG reductions.

5G+ and the safe advance of humanity is the most important and expansive issue of our lifetime

WHAT IS MISSING FROM CURRENT RF SAFETY PROTOCOLS?

- **No wireless safety testing** has been required for telecom mmWave and sub-mmWave frequency deployments, therefore, 5G+ small cell infrastructure installations have not been proven safe.
- **Zero dollars for RF safety** has been appropriated by Congress for product testing and wireless safety improvements that are needed to protect the general population.
- **There is no FCC science-based MPEL** decision making or review process that exists to routinely revise the MPEL for technology and science research updates because FDA no longer has the capacity or capability, personnel or expertise, etc., to carry out these functions.
- **There is no MPEL tracking and enforcement process** for the general population like every other major type of air pollutant currently has. Therefore, it is not known if/when the power levels and RFR emissions are exceeded to ensure thermal heating of tissue does not occur.
- **No RF mitigation measures are required to reduce the overall levels of background RFR** to avert biological harms, environmental damages and excessive CO2 emissions that can easily occur below the MPEL.
- **The CT industry does not have or want any 5G+ performance metrics gathered on themselves** that are made public and transparent to inform consumers on RF safety for their digital devices.

WHY WE NEED TO MEASURE AND REDUCE RFR

Excessive RF Power Levels Without MPEL Regulation

- [5G+ will exceed regulated power limits](#) and the MPEL in certain jurisdictions and will have to be legislatively adopted
- **5G+ base stations are an energy hog** requiring at least [3.5 times more power than 4G](#) base stations
- CT industry will be using [51% of global electricity by 2030](#)
- **5G+ network testing and regulating power levels to improve public safety is by-passed by industry** thereby greatly increasing the risk and impact of harm that is passed on to the uninformed consumer

Greenhouse Gas (GHG) Emissions will Rapidly Increase Without Regulation

- Total deregulation jeopardizes 2030 [net carbon zero objectives](#)
- No federal mandate to reduce CO2 GHG from CT industry, however, CT industry will be releasing 23% of global CO2 GHG
- GHG federal policies are inconsistent for telecoms and the Nation Task Force on Climate Change
- Telecoms not required to mitigate their GHG emissions, [pay for their pollution](#), contribute to national 2030 net carbon zero goals
- Reducing power consumption and RFR will lower GHG as will changing the fuel source for the telecom CT industry to a non-petro source

National Cyber Security Vulnerabilities

- *Power grid integrity is made vulnerable when 5G+ transmitters are hung on power lines*
- *Cyber security will remain deficient with wireless 5G+ due to the sheer volume of IoT devices and towers that will be linked to the grid which increases the likelihood of being hacked*
- *Data privacy can be unknowingly breached with [mesh, thread and RFID networks](#) that can [siphon important data](#) from any wireless devices jeopardizing personal and proprietary data*
- *5G+ system network frequency bandwidths will be shared with the [Department of Defense](#) and near band spectrum may be auctioned close to DoD's military frequencies [creating unanticipated interferences with astronomical research and weather predictions](#)*
- *5G satellites can easily be knocked out of orbit by [satellite collisions](#) and requires more hard wiring interfaces to reduce this threat*

Legal Issues and Public Policy

- ***Total deregulation violates FCC's purpose to promote safety of life and property ([47 USC 151](#)).***
- ***There is no strategic balance between regulated and unregulated federal policy on 5G+ expansion which makes 5G+ networks unsafe***
- ***FCC does not enforce an MPEL penal system** for those telecoms that violate the MPEL and knowingly endanger the general population*
- ***It's a breach of [fiduciary duty under 'loco parentis'](#)** for any public school administration to not protect students from the bioeffects of wifi and endanger their health and well being while at school*
- ***Telecom industry is not insurable** and does nothing to attenuate the [high risk/high impact](#) for safety concerns due to RFR (see page 29 in link) - also see [here](#)*
- ***Penal and criminal codes for assault and battery may apply** to certain frequency signals that penetrate the skin such as 6 Ghz which can penetrate the skin 8.1mm and cause biological harm*
- ***Electrohypersensitivity (EHS) is disability that is recognized by the [US Access Board](#)**, but is difficult to get enforcement by public officials in most public settings/meetings/buildings*
- ***[ADA accommodations](#) to avoid RF towers in front of your house is not being recognized** in the judicial court system in violation of the ADA federal policy that was made to protect the disabled*

No Consumer Protections

- *[5G+ devalues property up to 20%](#) if a wireless transmission facility is placed in a right of way*
- *5G+ expansion violates privacy rights by commercial data syphoning and data mining*
- *5G+ violates property rights because owners cannot opt-out*
- *There is no requirement for safety testing of 5G+ prior to deployment*
- *No informed consent - unauthorized massive human experimentation*
- *[Social Equity Scoring](#) being developed by NGO's*
- *Industry passes the risk of physical harm to the uninformed consumer instead of testing and regulating to improve public safety*

Health Issues Due to Background RFR Increases

- *[Children are endangered](#) the most by CT industry deregulation. Signal penetration from wireless devices travels deeper into a [child's thinner skull](#) and "they can absorb up to [ten times more radiation](#) in the bone marrow of their skulls than adults"*
- *Schools are rapidly installing wireless towers on their properties for profit and using wifi routers while endangering the safety of children who are in close proximity during the school days.*
- *[Personal injuries](#) due to thermal heating will be more common*
- *Electromagnetic Hypersensitivity Is not nationally recognized as a disability that is eligible for accommodations with respect to 5G+*
- *FCC and the federal government and therefore local municipalities do not permit health exemptions for averting 5G+ installations in front of their houses which violates the Americans Disabilities Act*
- *Transfer of government officials' power to NGO's is not in public's best interest*
- *There is no protective consumer education or obvious notice from wireless device manufacturers regarding the biological harms of RFR from WTF's and wireless devices*
- *Transferred health liabilities from the CT industry to the end user violates consumer rights and the consumer does not have substantive recourse to recoup health financial losses from CT industry*

WHAT THE TERRA ACT OF 2021 DOES TO RECTIFY THESE ISSUES:

- *Assigns money for public safety to create an MPEL electronic automatic enforcement process and initiates RFR mitigation measures to reduce background RFR and protect the general population.*
- *Implements a process for reviewing and updating the maximum permissible exposure limits (MPEL) for non-ionizing radiation.*
- *Restructures and realigns federal agencies' roles and responsibilities*
- *Engages in mandating an extensive wireless device/antenna testing program prior to deployment and installation.*
- *Requires fuses to be installed to automatically limit power usage in strategic areas; schools, public buildings, neighborhoods, and higher density urban areas.*
- *Establishes state managed wifi-free zones similar to non-smoking zones in schools and public buildings.*