



English



English



Electric vehicles: the electromagnetic environmental impact

Electric Vehicles: The Electromagnetic Environmental Impact

How adoption of electric vehicles could create uninhabitable areas due to increased electromagnetic exposure

How EV Adoption Could Create Uninhabitable Areas Due to Increased Electromagnetic Exposure



KEITH CUTTER

JUNE 13, 2024



32



13

Share

Promoting widespread adoption of electric vehicles (EVs) is often touted as a forward-thinking solution to various challenges. However, from an electromagnetic perspective, this program could create unforeseen disasters of epic proportions.

Unintentional exposure to synthetic electromagnetic fields (EMFs) from electric vehicle charging and use affects everyone nearby, even those who are aware of the risks and take precautions.

In my work, I've seen how even just one neighbor with an EV charging station can have devastating effects on a customer whose home shares the same transformer. Imagine if every house had the same problem. Based on my experiences as an independent EMC consultant, this opinion piece explores the many significant electromagnetic challenges posed by the electric vehicle program, highlighting the potential impacts on residential environments and broader communities.

Increased AC magnetic fields

The addition of electric vehicle (EV) charging stations in residential homes significantly increases alternating current (AC) magnetic fields (MF) in these environments. These charging stations consume significant amounts of energy to recharge electric vehicle batteries, generating powerful alternating magnetic fields that can spread throughout the home and surrounding areas. Unlike other household appliances, electric vehicle chargers operate for extended periods of time, often overnight, resulting in prolonged exposure. This continued and intensified energy consumption in residential areas, where people live and sleep, results in a noticeable increase in magnetic field levels

alternative inside homes.

Additionally, the widespread integration of electric vehicle charging stations is impacting the broader environment due to the fatal flaw in North America's electricity distribution system, which returns the majority of power via the Earth . This fault affects the entire environment between each house and the electrical substation. As more households in a neighborhood install electric vehicle chargers, the cumulative effect exacerbates the problem, creating a pervasive environment of elevated AC magnetic field exposure across a larger area.

This widespread increase in magnetic fields extends beyond individual residences and affects the surrounding community.

This widespread increase in AC magnetic fields will affect not only the interiors of homes, but also backyards, playgrounds, vacant fields, and all land within electrical “service areas.” The pervasive nature of these fields means that all spaces within these areas, where people spend time and children play, will be subject to increased exposure to magnetic fields due to the cumulative effect of electric vehicle charging stations . Increasing current flowing over existing overhead power distribution lines will increase MF intensity near these lines.

Impossible to remedy

An experienced EMF consultant can effectively remediate many exposures to synthetic EMFs, but not to environmental AC magnetic fields due to current passing through the ground. Even terrain features, the last hope for protection against terrestrial RF exposures, will not protect against environmental alternating magnetic fields caused by increased current flow through the earth.

Increase in dirty electricity

As an independent EMC consultant, I have seen first-hand how an uninformed neighbor's poor electromagnetic decisions affect others nearby. This is never more true than with the impacts on dirty electricity (DE). The integration of electric vehicle charging stations into residential electrical systems significantly increases the production of DE, which refers to high-frequency voltage transients and harmonics superimposed on the standard 60 Hz electrical supply. Due to their high power consumption and the AC to DC conversion process, electric vehicle chargers can introduce significant electrical noise into the home's wiring system, affecting power quality and propagating throughout the home. electrical network.

DE exposures can be reduced, but not eliminated

Dirty electricity doesn't just impact the home equipped with the EV charger. It can spread via shared power lines and affect neighboring homes. The greatest effects will be on homes served by transformers intended for electric vehicle owners. Although such impacts can be reduced through intensive and competent remediation efforts, they can never be entirely eliminated.

No meaningful monitoring

To my knowledge, much like RF radiation exposure, there is no significant monitoring of increasing environmental exposure to magnetic fields (MF) or dirty electricity (DE). This lack of oversight means that

the growing impact of these electromagnetic phenomena remains unaddressed. We can hope for a future in which such monitoring exists and is based on biological effects, but today we simply do not have it.

Certain areas and homes will be disproportionately affected (higher DE and MF), depending on factors such as proximity to electric vehicle charging stations, proximity to an electrical substation, ground resistance, population density, surface electricity distribution lines and the specific characteristics of the local electricity distribution system.

Synthetic high-frequency EMF emissions from electric vehicles in use

Electric vehicles (EVs), particularly those equipped with autonomous driving features, emit various high-frequency synthetic electromagnetic fields (EMFs) that contribute to increased new exposures to nearby individuals. This includes pedestrians, motorists, cyclists, customers on sidewalks and homes located near roadways. These emissions come from a suite of components deployed by self-driving cars.

Self-driving cars deploy a combination of LiDAR, radar and ultrasonic sensors, all of which emit different types of synthetic EMFs. The radar systems on these vehicles emit millimeter-wave RF radiation. This RF radiation exposes the electric vehicle driver and all life near the vehicle. LiDAR systems, on the other hand, emit invisible synthetic light pulses. Ultrasonic sensors emit inaudible sounds. None of these systems has proven to be harmless.

Together, these technologies create a complex web of man-made EMF emissions that can affect anyone nearby. The continued operation of these systems, particularly in densely populated urban areas, raises concerns about cumulative exposure to synthetic EMFs for life in these environments.

Grounding or Grounding

While productive grounding is still feasible today, it may not be feasible tomorrow as the electric vehicle program progresses. This is due to increased current flow through the earth and the profound effects of a massive increase in dirty electricity (DE) harmonics from electric vehicle chargers.

Solutions

I like to focus on solutions: how to survive the electromagnetic poisoning happening around us. Unfortunately, the solutions for the EV program are fewer and will require much greater personal and family sacrifices.

To avoid increased exposure to environmental MFs, you may want to move to an area with a much lower population density. To reduce DE exposure, you can get help from a knowledgeable EMF consultant, but you cannot completely eliminate DE exposure when living in electric vehicle deployment areas. Living electrically closer to power generation facilities can provide cleaner energy in a sparsely populated area. I am referring to land sufficiently far from the installation to avoid the effects of electricity production and high voltage lines but served by the first electrical substation exiting the production source.

The broad spectrum of new high-frequency synthetic EMFs presents many technical challenges associated with direct exposure to an operating electric vehicle. Part of the solution is to avoid purchasing an electric vehicle. Additionally, living further from roads, avoiding sidewalk eating, reducing time spent on the road, avoiding high-density traffic conditions, and limiting walking, cycling, and other activities near roads will also help to mitigate exposure.

Conclusion

Widespread adoption of electric vehicles (EVs) could create a disaster of epic proportions. Unintentional exposure to synthetic EMFs from EV charging and use affects everyone, leading to increased AC magnetic fields and dirty electricity (DE) levels in residential and wider environments. The lack of meaningful monitoring of these exposures compounds the problem, with certain areas and homes disproportionately affected. Additionally, higher frequency synthetic EMF emissions from autonomous driving components contribute to cumulative exposure risks. Although the impacts of EDs can be partially corrected with the help of experts, the environmental impacts of MFs have no solution. The potential effects on grounding practices also raise concerns about the wider implications for those affected.

We cannot afford to adopt this program, especially for our children and grandchildren.



32 Likes32 Likes · 11 Restackers11 Repacks

13 comments 13 Comments



To write a comment...



Martinus GryparisMartinus Gryparis A good friendA Good Friend June 13Jun 13

♥ Liked by Keith CutterLiked by Keith Cutter

Thank you, this is very important. and like other scientists before you, hundreds of years ago, you warned of the devastating effects of various new technologies. Thank you, this is very important. and like other scientists before you, 100s of years ago, you warn of the devastating effects of various novel technologies.

I can't help but think that the ultimate protection is wisdom, compassion and vitality. If we do not insist on profound social change, first at the individual level, then at the group level, we cannot hope to change this incessant expansion of the means to destroy life. I cannot help but think that the ultimate

protection is wisdom, compassion, and vitality. If we do not push for deep social change, first in the individual, then the group, we cannot hope to change this incessant broadening of the ways to destroy life.

♡ LIKE (6)LIKE (6)

💬 REPLYEPLY

📤 SHARESHARE



2 replies by Keith Cutter and others2 replies by Keith Cutter and others



CharlieCharlie June 16Jun 16 ♥ Liked by Keith CutterLiked by Keith Cutter

Even worse is being inside one of those slow killing machines...Even worse is being inside one of these slow kill machines...

Nothing is good about this technology.

Nothing, a complete inversion of reality.

♡ LIKE (1)LIKE (1)

💬 REPLYEPLY

📤 SHARESHARE



1 reply by Keith Cutter1 reply by Keith Cutter

11 more comments...11 more comments...