



This is the print version of the [Skeptical Science](#) article '[Electromagnetic fields from solar farms are harmful to human health](#)', which can be found at <http://sks.to/solaremf>.

Are electromagnetic fields from solar farms harmful to human health?

What The Science Says:

The electromagnetic fields generated at a solar farm are similar in strength and frequency to those of toaster ovens and other household appliances—and harmless to humans.

Climate Myth: Electromagnetic fields from solar farms are harmful to human health

"The EMF (electromagnetic field) from solar farms poses serious health risks especially to those who have electromagnetic hypersensitivity." ([How Solar Affects YOU!](#))

The electromagnetic fields (EMF) generated at a solar farm are similar in strength and frequency to those of toaster ovens and other household appliances—and harmless to humans. A detailed analysis from North Carolina State University concluded that there is “no conclusive and consistent evidence” of “negative health impact[s] from the EMF produced in a solar farm.”¹

EMF exposure levels vary according to the EMF source, proximity to the source, and duration of the exposure. On a solar farm, EMFs are highest around electrical equipment such as inverters. However, even when standing next to the very largest inverter at a utility-scale solar farm, one’s exposure level (up to 1,050 milligauss, or mG) is less than one’s exposure level while operating an electric can opener (up to 1,500 mG), and well within accepted exposure limits (up to 2,000 mG)². When standing just nine feet from a residential inverter, or 150 feet from a utility-scale inverter, one’s exposure drops to “very low levels of 0.5 mG or less, and in many cases . . . less than background levels (0.2 mG).” For comparison, a typical American’s average background exposure level is 1mG, reaching 6 mG when standing three feet from a refrigerator, and 50 mG when standing three feet from a microwave³.

The electromagnetic fields present on a solar farm constitute “non-ionizing radiation,” which, by definition, generates “enough energy to move atoms in a molecule around (experienced as heat), but not enough energy to remove electrons from an atom or molecule (ionize) or to damage DNA.” In addition, EMFs are extremely low in frequency, which means they contain “less energy than other commonly encountered types of non-ionizing radiation like radio waves, infrared radiation, and visible light.”

Footnotes:

[1] Tommy Cleveland, [Health and Safety Impacts of Solar Photovoltaics](#), NC State University, 14 (May 2017)

[2] Massachusetts Department of Energy Resources et al., [Questions & Answers: Ground-Mounted Solar Photovoltaic Systems](#), 10-11 (Jun. 2015)

[3] Massachusetts Clean Energy Center, [Study of Acoustic and EMF Levels from Solar Photovoltaic Projects](#) (Dec. 2012)

This rebuttal is based on the report '[Rebutting 33 False Claims About Solar, Wind, and Electric Vehicles](#)' written by Matthew Eisenson, Jacob Elkin, Andy Fitch, Matthew Ard, Kaya Sittinger & Samuel Lavine and published by the [Sabin Center for Climate Change Law](#) at Columbia Law School in 2024. Skeptical Science sincerely appreciates Sabin Center’s generosity in collaborating with us to make this information available as widely as possible.



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