

New study affirms environmental justice communities in RGGI states don't equitably benefit from emissions reductions

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The Regional Greenhouse Gas Initiative (RGGI), the first market-based emissions reduction program in the U.S. energy sector, was established in 2009. A [new study published today](#) in *PLOS One* titled "Environmental justice and power plant emissions in the Regional Greenhouse Gas Initiative states" is the first empirical assessment of disparities in pollutants from electricity generation within environmental justice communities in RGGI states.

"While the power sector has made progress in reducing emissions in the aggregate, current policies and market trends fail to address the fundamental problem of disparate pollutant burdens among communities," said Dr. Juan Declet-Barreto, lead author of the study and a senior social scientist for climate vulnerability at the Union of Concerned Scientists. "The effect is that emissions reductions from [power plants](#) within RGGI states have largely benefitted non-environmental justice communities. Environmental justice communities have long shared their lived experience of being overburdened by harmful emissions and our study based on data from the plants themselves confirms this."

The analysis, which focused on [electricity generation](#) in RGGI states during the time period of 1995 through 2015, finds significant differences in siting and operation of power plants located in communities of color and low-income communities compared to other communities. According to the study, the percentage of people of color who live less than 6.2 miles from a power plant is 23.5% higher than the percentage of white people in that same area. The percentage of people living in poverty within 5 miles of a power plant is 15.3% higher than the percentage of the population not living in poverty. Additionally, the environmental justice communities in the study also proportionately house more power plant units—often natural gas—than non-environmental justice communities, with 42.6% of environmental justice communities hosting multiple units compared to 28% of other

communities.

"Carbon dioxide is harmful and gets a lot of attention, but it's not the only dangerous pollutant that power plants emit," said Dr. Declet-Barreto. "Our study also included sulfur dioxide and nitrogen oxide, co-pollutants that are well known to harm human health and are linked to premature deaths. Unlike carbon dioxide, which disperses globally, co-pollutants disperse regionally, meaning they can significantly impact the local communities where power plants are located.

"Understanding the local effects of electricity generation is crucial to make sure future emissions reduction policies are just and effective. Although power plants in RGGI states have seen a reduction in heat-trapping and co-pollutant emissions due to generation changes resulting from market trends and policies, the benefits are not reaching everyone equitably. The study suggests that additional targeted policies and standards that guarantee steep emission reductions in environmental justice communities are needed to solve the historical problem of disproportionate siting and operation of power plants, which increases the exposure of communities of color and low-income communities within RGGI states to harmful co-pollutants."

More information: Environmental justice and power plant emissions in the Regional Greenhouse Gas Initiative states, *PLOS ONE* (2022). [DOI: 10.1371/journal.pone.10012345](https://doi.org/10.1371/journal.pone.10012345)

Provided by Union of Concerned Scientists

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