Climate Action Without Toxic Chemicals

We can't solve the climate crisis by fueling a toxic pollution crisis – true solutions protect both people and the planet.

safer states An Alliance for a Healthier World

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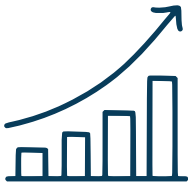
The Problem: Trading One Crisis for Another

Climate change and toxic chemicals are deeply connected. Tackling one without the other risks trading one crisis for another. Fossil fuels drive both climate change and the production of toxic chemicals and plastics.[1] Exposure to these chemicals worsens health harms, especially for people already vulnerable to climate disasters.

To protect health and climate, policymakers must reject the false choice of a clean energy transition that depends on toxic chemicals, and instead advance proven, healthier alternatives.

How Chemical Production Fuels Climate Change



Chemicals and plastics production is increasing. As demand for fossil fuels declines for energy and transportation, the oil and gas industry is expanding into chemicals and plastics.[2]

A leading source of climate pollution. Chemical and plastics production makes up nearly half of domestic energy and emissions[3] — releasing about four times more climate-warming pollution than airlines, equal to 600 coal-fired power plants.[4]

Communities bear the burden. Facilities are often built in overburdened areas like Louisiana's "Cancer Alley,"[5] where more than 150 petrochemical plants pollute neighborhoods and worsen health inequities.

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1 Tickner, J., Geiser, K., & Baima, S. (2021). Transitioning the Chemical Industry: The Case for Addressing the Climate, Toxics, and Plastics Crises. Environment: Science and Policy for Sustainable Development, 63(6), 4–15. https://doi.org/10.1080/00139157.2021.1979857

2 Brigham, K. (2025, April 17). How the fossil fuel industry is pushing plastics on the world. CNBC.

3 U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, Industrial Efficiency and Decarbonization Office. (n.d.). Chemical and petrochemical manufacturing.

4 Beyond Petrochemicals. (2024, April 18). New report shows global plastic production as significant source of carbon pollution.

5 Baurick, T., Younes, L., & Meiners, J. (2019, October 30). Welcome to "Cancer Alley," where toxic air is about to get worse. ProPublica.

PFAS and Climate

The chemical lobby claims that certain PFAS are "essential" for the clean energy transition.[6] The science shows otherwise: PFAS themselves fuel climate harm and toxic pollution.[7]

PFAS Gases (F-Gases)

- Marketed as "climate-friendly" replacements, PFAS gases like hydrofluoro-olefins (HFOs) are now the largest source of PFAS pollution globally.[8]
- Many break down into trifluoroacetic acid (TFA), a toxic, persistent chemical found to be increasing globally[9] in water and the environment.

PFAS Plastics (Fluropolymers)

- PFAS Plastics (also called fluoropolymers) can cause harm[10] throughout their entire life cycle—from production to disposal.
- Their manufacture releases potent climate pollutants[11] that contaminate communities and the climate alike.

Using PFAS in clean energy is not innovation.
It is industry clinging to outdated, harmful chemicals and practices.

Healthy Solutions for Climate and Communities

We don't have to choose between climate action and public health. Safer, effective alternatives already exist and are in use today:

- **Insulation:** Fiberglass provides safe, effective temperature control — unlike toxic spray foam insulation that harms workers and underperforms.
- **Electronics:** Major manufacturers like Apple and Dell are proving clean energy technologies can be built without harmful PFAS. More than 100 manufacturers[12] have successfully tested PFAS-free alternatives for electronics and semiconductors.
- **Coolants:** PFAS-free cooling systems are already in use worldwide, showing we can protect communities from both extreme heat and harmful chemicals.

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6 American Chemistry Council. (n.d.). Fluoropolymers. In Chemistry in America.
7 McKenna, P., & Bruggers, J. (2021, March 9). A single chemical plant in Louisville emits a super-pollutant that does more climate damage than every car in the city. InsideClimate News.
8 ChemSec. (2024, May 16). F-gases unveiled as primary contributors to the PFAS pollution crisis.
9 Cahill, T. M. (2022). Increases in trifluoroacetate concentrations in surface waters over two decades. Environmental Science & Technology, 56(13), 9428–9434. https://doi.org/10.1021/acs.est.2c01826
10 Lohmann, R., Cousins, I. T., DeWitt, J. C., Glüge, J., Goldenman, G., Herzke, D., Lindstrom, A. B., Miller, M. F., Ng, C. A., Patton, S., Scheringer, M., Trier, X., & Wang, Z. (2020). Are fluoropolymers really of low concern for human and environmental health and separate from other PFAS? Environmental Science & Technology, 54(20), 12820–12828. https://doi.org/10.1021/acs.est.0c03244
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12 Sharma, R., Shelke, S., Bagheri, M., Morose, G., et al. (2023). *Safer and effective alternatives to perfluoroalkyl-based surfactants in etching solutions for the semiconductor industry. Journal of Cleaner Production*, 415, Article 137879. https://doi.org/10.1016/j.jclepro.2023.137879